

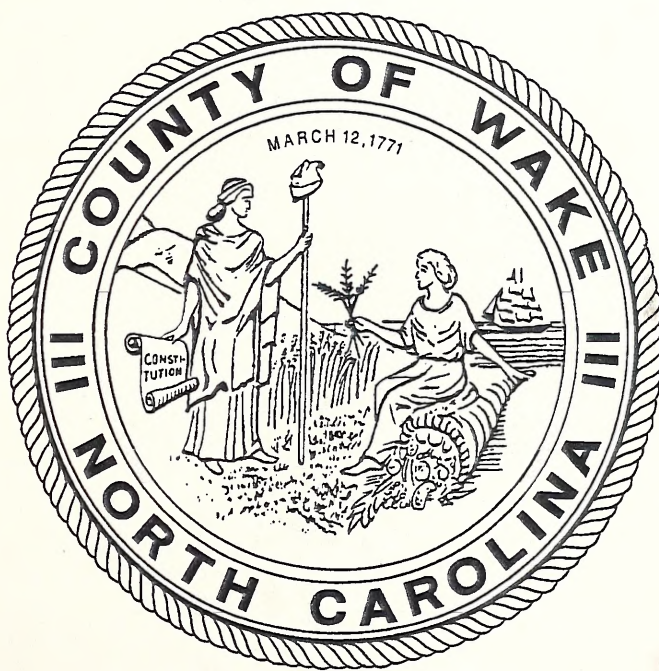
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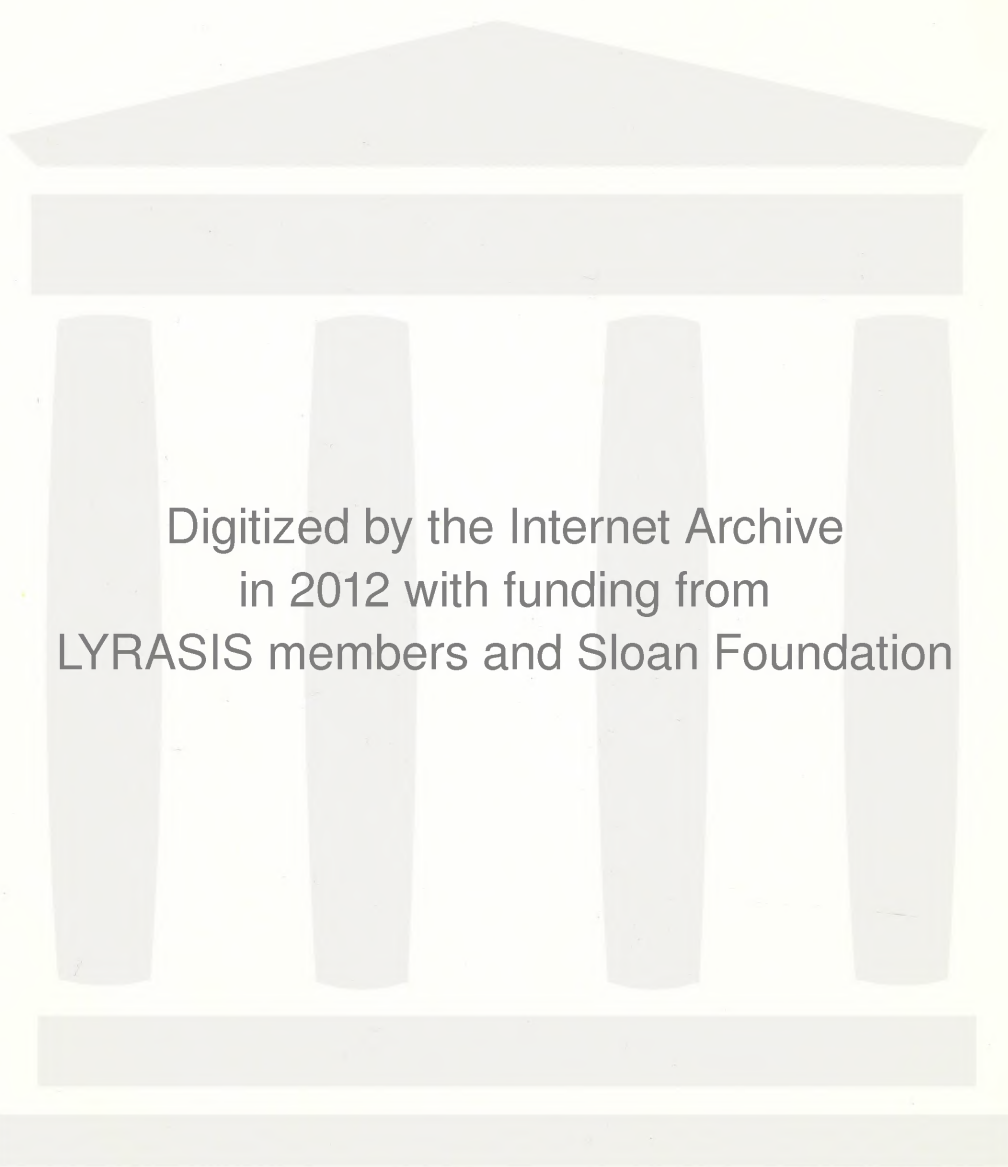


*North Carolina Department of Transportation
Division of Highways
Statewide Planning Branch*

WAKE COUNTY THOROUGHFARE PLAN



1994



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**WAKE COUNTY
THOROUGHFARE PLAN**

Prepared by:

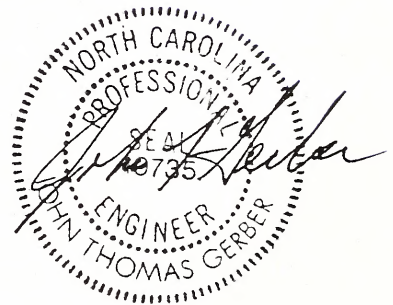
Statewide Planning Branch
Division of Highways
North Carolina Department of Transportation

In cooperation with:

Wake County
Federal Highway Administration

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1. INTRODUCTION

The economic growth of a region is largely dependent on the efficiency of the area's transportation system. The ability to move people and goods quickly and conveniently is essential to provide the opportunity for the area to reach its full growth potential. Therefore, it is necessary to develop a thoroughfare system which can efficiently handle present and anticipated traffic needs.

The Wake County Thoroughfare Plan update originated at the request of Wake County on March 7, 1991. The County noticed there were various discrepancies between their existing plan and the municipal plans within Wake County. It appears most of the differences were a result of the municipal plans being updated while the County's plan was not. This resulted in discrepancies where the municipal plans transition into the county's jurisdiction.

This update is an attempt to identify the discrepancies and unless noted in the street appendix, modify the Wake County Plan to reflect the municipal plans. The Capital Area Metropolitan Planning Organization (CAMPO) has been expanded to include all of Wake County. This will allow the County and the municipalities thoroughfare system plan to develop collectively rather than as separate entities during the CAMPO Thoroughfare Plan update.

The Wake County Thoroughfare Plan has been mutually adopted by all parties and it is the responsibility of the local government to implement the plan. Wake County can provide assistance in the implementation of the plan through subdivision regulations and zoning ordinances. Wake County last adopted the plan May 18, 1992 and the North Carolina Board of Transportation adopted the plan August 14, 1992. This report will provide an update for the county plan by reflecting changes in the municipal plans.

The plan is based on anticipated growth of the area based on information from the local governmental planning and engineering staff and analysis of past trends. Prior to construction of specific projects, a more detailed study will be required to reconsider development trends and to determine specific locations and design requirements.

2. COUNTY THOROUGHFARE PLANNING PRINCIPLES

Purpose of Planning

The main objective of thoroughfare plan is to assure that the road system will progressively develop to serve the future travel desires adequately. Thus, the main consideration in thoroughfare planning is to develop provisions for street and highway improvements, so when the need arises, feasible opportunities are available to make these improvements.

The underlying concept of the thoroughfare plan is to provide a functional system of streets, roads, and highways that permit direct, efficient, and safe travel. Different elements in the system are designed to have specific functions and levels of service, thus minimizing the traffic and land service conflict.

Streets, roads, and highways have two primary functions: they provide traffic service and land service. When combined, these two services are basically incompatible. This conflict will not be serious if both traffic and land service demands are low. However, when traffic volumes are high, excess conflicts created by uncontrolled and intensely used abutting property result in intolerable traffic flow friction and congestion.

There are two major benefits derived from thoroughfare planning. First, each road or highway can be designed to perform a specific function and provide a specific level of service. This permits savings in right-of-way, construction, and maintenance costs. It also protects residential neighborhoods from cut-through traffic and encourages stability in travel and land use patterns. Second, local officials are informed of future improvements and can incorporate them into planning and policy decisions. This will permit developers to design subdivisions in a non-conflicting manner, direct school and park officials to better locate their facilities, and minimize the damage to property values and community appearance that is sometimes associated with road improvements.

In the urban planning area, the local municipality generally has planning jurisdiction. Outside the urban planning area, the county has planning jurisdiction.

Objectives of Thoroughfare Planning

Thoroughfare planning is the process used to assure the development of the most appropriate street system to meet the existing and future travel desires within the urban area. The primary aim of a thoroughfare plan is to guide the development a street system in a manner consistent with changing traffic demands. Through proper planning for street development, costly errors and needless expense can be averted. A thoroughfare plan will enable

street improvements to be made as traffic demands increase, and help eliminate unnecessary improvements. By developing the street system to keep pace with increasing traffic demands, a maximum utilization of the system can be attained that will require a minimum amount of land for street purposes. In addition to providing for traffic needs, the thoroughfare plan should embody those details of good urban planning necessary to present a pleasing and efficient urban community. The location of present and future population and commercial and industrial enterprises, affects major street and highway locations. Conversely, the location of major streets and highways within the urban area will influence the urban development pattern.

Other objectives of a thoroughfare plan include:

- To provide for the development of an adequate major street system as land development occurs;
- To reduce travel and transportation costs;
- To reduce the cost of major street improvements to the public through the coordination of street system with private action;
- To enable private interests to plan their actions, improvements, and development with full knowledge of public intent;
- To minimize disruption and displacement of people and businesses through long range planning for major street improvements;
- To reduce environmental impacts such as air pollution, resulting from transportation; and
- To increase travel safety.

These objectives are achieved through improving both the operational efficiency of thoroughfares, and improving the system efficiency by system coordination and layout.

Thoroughfare Classification System

In the thoroughfare plan, elements are classified as interstate/freeway, major thoroughfares, minor thoroughfares, or local streets. The interstate/freeway and major thoroughfares are the primary traffic arteries of the urban area providing for traffic movements within, around, and through the area. Minor thoroughfares are designed to collect traffic from local streets and carry it to the major thoroughfare system. Local streets, which may be further classified as residential, commercial, or industrial streets, are designed only to provide access to abutting property. All thoroughfares are shown on the rural

portion of the county thoroughfare plan. However, due to the limited amount of detail that can be shown within urban areas, where urban plans exist, only interstate/freeway and major thoroughfares are shown on the county plan. Urban plans can be obtained for the Greater Urban Raleigh Area, Knightdale, Wake Forest, Holly Springs, Fuquay-Varina, Zebulon, Wendell, and Rolesville.

Principles of Thoroughfare Planning

Operational Efficiency

A street's operational efficiency is improved by increasing the capability of the street to carry vehicular traffic and people. In terms of vehicular traffic, a street's capacity is the maximum number of vehicles that can pass a given point on a roadway during a given period under prevailing roadway and traffic conditions. Capacity is affected by the physical features of the roadway, nature of traffic, and weather.

Physical ways to improve vehicular capacity include:

Street widening - widening a street from two to four travel lanes more than doubles the capacity by providing additional maneuverability for traffic.

Intersection improvements - increasing the turning radii, adding exclusive turn lanes, and channelizing movements can improve the capacity of an existing intersection.

Improving vertical and horizontal alignment - reduces the congestion caused by slow moving vehicles.

Eliminating roadside obstacles - reduces side friction and improves a driver's field of sight.

Operational ways to improve street capacity include:

Control of access - A roadway with complete access control may carry three times the traffic handled by a non-controlled access street with identical lane width and number. Where driveways are permitted, apply driveway limitations and encourage sharing of driveways to reduce the effect on the capacity of the road.

Parking removal - Increases capacity by providing additional street width for traffic flow and reducing friction to flow caused by parking and unparking vehicles.

One-way operation - The capacity of a street can sometimes be increased 20-50%, depending upon turning movements and street width, by initiating one-way traffic operations. One-way streets also can improve traffic flow by decreasing potential

traffic conflicts and simplifying traffic signal coordination.

Reversible Lanes - Reversible traffic lanes may be used to increase street capacity in situations where heavy directional flows occur during peak periods.

Signal phasing and coordination - Uncoordinated signals and poor signal phasing restrict traffic flow by creating excessive stop-and-go operation.

Altering travel demand is a third way to improve the efficiency of existing streets. Travel demand can be reduced or altered in the following ways:

Carpools - Encourage people to form carpools and vanpools for journeys to work and other trip purposes. This reduces the number of vehicles on the roadway and raises the people carrying capability of the street system.

Alternate mode - Encourage the use of alternate modes of travel such as transit, bicycles, and pedestrians.

Work hours - Encourage industries, business, and institutions to stagger work hours or establish variable work hours for employees. This will reduce travel demand in peak periods and spread peak travel over a longer period.

Land use - Plan and encourage land use development or redevelopment in a more travel efficient manner.

System Efficiency

Another means of altering travel demand is the development of a more efficient system of streets that will better serve travel desires. A more efficient system can reduce travel distances, time, and cost. Improvements in system efficiency can be achieved through the concept of functional classification of streets and development of a coordinated major street system.

Application of Thoroughfare Planning Principles

The concepts presented in the discussion of operational efficiency, system efficiency, and classification are conceptual tools available to the transportation planner in developing a thoroughfare plan. In actual practice, thoroughfare planning is done for established areas and is constrained by existing land use and street patterns, existing public attitudes and goals, and current expectations of future land use. Compromises must be made because of these and the many other factors that affect major street locations.

Throughout the thoroughfare planning process it is necessary from a practical viewpoint that certain basic principles be followed as closely as possible. These principles are as follows:

1. The plan should be derived from a thorough knowledge of today's travel - its component parts, and the factors that contribute to it, limit it, and modify it.
2. Traffic demands must be sufficient to warrant the designation and development of each major street. The thoroughfare plan should be designed to accommodate a large portion of major traffic movements on a few streets.
3. The plan should conform to and provide for the land development plan of the area.
4. Certain considerations must be given to urban development beyond the current planning period. Particularly in outlying or sparsely developed areas that have development potential, it is necessary to designate thoroughfares on a long-range planning basis to protect rights of way for future thoroughfare development.
5. While being consistent with the above principles and realistic in terms of travel trends, the plan must be economically feasible.

These principals were used in the development of the thoroughfare plans. Again, note that the purpose for this study is to present a collective update for the Wake County Thoroughfare Plan that reflects any changes made to the municipal plans.



3. POPULATION, LAND USE, AND TRAFFIC

Wake County is in the central part of the State and is considered in the Southern Piedmont land resource area consisting of 854 square miles of gently rolling hills and long, low ridges adjacent to major streams. In 1990 Wake County ranked the second most populous county in the State. Figure 1 shows the location of Wake County.

The County is conveniently bisected by Interstate 40 and U.S. Highways 64 and 401. Additional major routes are:

US 1, a large portion of this facility is designed to freeway standards and connects the County from the southwest to the northeast.

US 70, a very developed facility connecting the County from the northwest to the southeast.

NC 50, a north-south route that is two lanes and quite rural in the fringes of the County but very developed with varying cross-section in the urban area.

NC 54, serves as a secondary commuter route between Raleigh, Research Triangle Park (RTP), and Chapel Hill, as well as a major land access facility.

NC 55, a north-south route that is two lanes with a portion of the system carrying traffic from Fayetteville to Durham.

NC 98, serves as an east-west route carrying traffic Durham and Research Triangle Park.

Factors Affecting Transportation

A thoroughfare plan must be based on forecasts of future travel characteristics. Such forecasts consider the following items: (1) historic and potential population changes; (2) significant trends in the economy; and (3) the character and intensity of land development. Additional items that vary in influence include the effects of legal controls such as zoning ordinances and subdivision regulations, availability of public utilities and transportation facilities, and topographic and other physical features of the area.

Population Trends

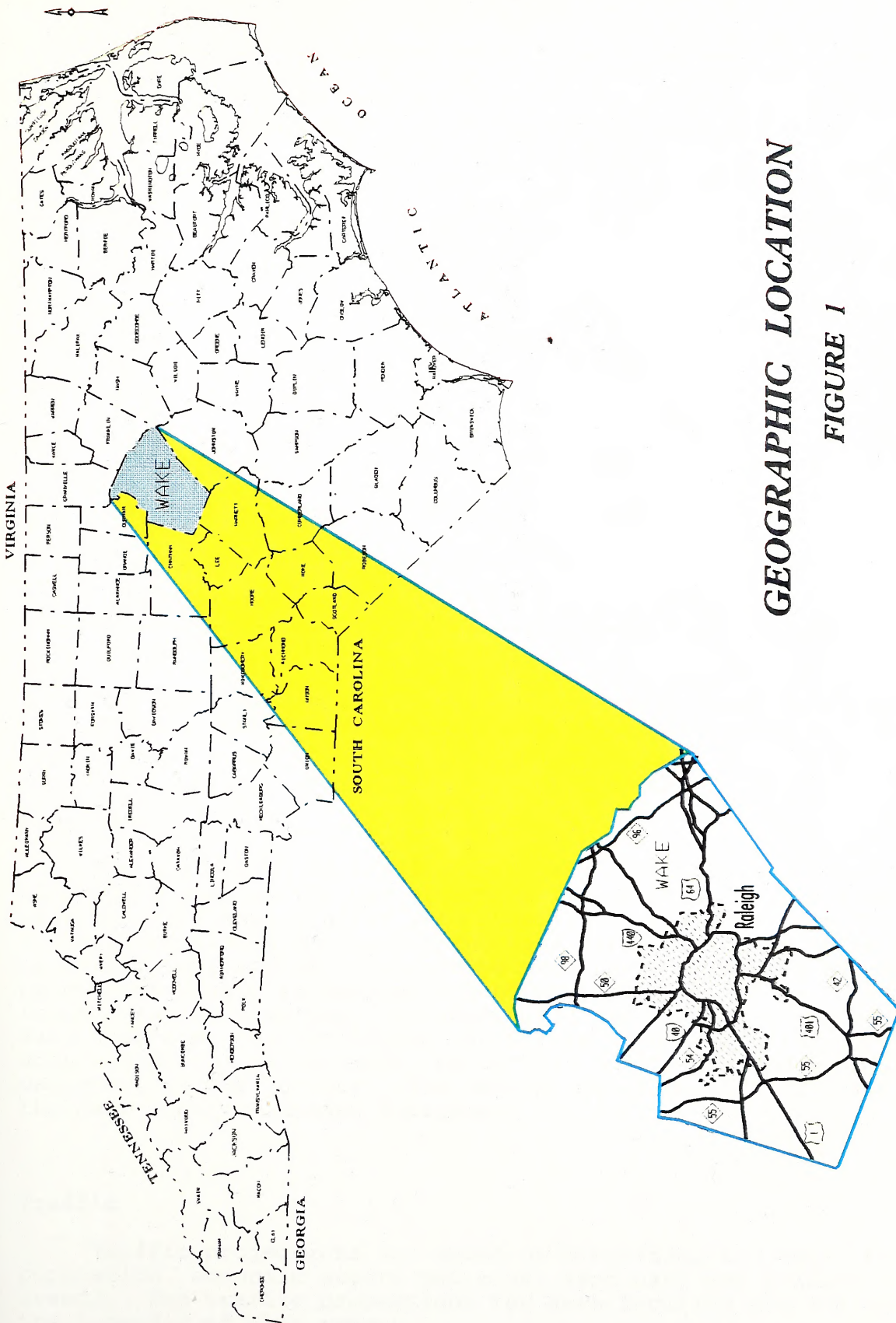
The volume of traffic on a section of roadway is a function of the size and location of the population it serves. Analyzing population trends is one of the first steps in transportation planning.

Table 3-A shows the population trends from 1960 to 1992 for the municipalities in Wake County. As indicated by these figures, the predominant growth has been in the western and northern regions of the County. However, tremendous residential growth is currently being experienced from the southern portions of Raleigh and Cary down to Holly Springs and Fuquay-Varina. It is also anticipated that significant residential and commercial growth will continue to the north of Raleigh to include Wake Forest.

Table 3-B shows the historical and projected population for Wake County and the State of North Carolina from 1940 to 2010. Wake County has grown at a significantly greater rate than the State as a whole. This trend is expected to continue throughout the next 20 years. For this reason, it is vitally important that transportation planning be an integral part of an overall aggressive plan to shape the future of the County.

TABLE 3-A					
Population of Wake County, by Municipality 1960 - 1992					
YEAR	1960	1970	1980	1990	*1992
WAKE CO.	169,082	229,006	301,429	423,380	459,544
APEX	1,368	2,234	2,847	4,968	5,955
CARY	3,356	7,686	21,763	43,858	53,203
FUQUAY-VARINA	3,389	3,576	3,110	4,562	4,814
GARNER	3,451	4,923	10,073	14,967	15,702
HOLLY SPRINGS	558	697	688	908	1,379
KNIGHTDALE	622	815	985	1,884	2,334
MORRISVILLE	222	209	251	1,022	1,756
RALEIGH	93,931	122,830	150,255	207,951	225,615
ROLESVILLE	358	533	381	572	573
WAKE FOREST	2,664	3,148	3,780	5,769	6,305
WENDELL	1,620	1,929	2,222	2,822	3,184
ZEBULON	1,534	1,839	2,055	3,173	3,377

* 1992 population projections (actual census taken every 10 years) the last census was 1990. Office of State Budget and Management.



GEOGRAPHIC LOCATION

FIGURE 1



TABLE 3-B

**Historical and Projected Population
Wake County and the State**

Year	Wake Co	% Change	North Carolina	% Change
-----	-----	-----	-----	-----
1940	109,544	----	3,571,623	----
1950	136,450	24.5	4,061,929	13.7
1960	169,082	23.9	4,556,155	12.2
1970	229,006	35.4	5,048,411	10.8
1980	301,429	31.6	5,880,095	16.5
1990	423,380	40.5	6,628,637	12.7
2000	* 549,728	29.8	* 7,399,683	11.6
2010	* 683,102	24.2	* 8,070,877	9.1

* 1992 Population projections from the North Carolina Office of State Budget and Management, Demographics Unit.

Land Use

The generation of traffic on a particular thoroughfare is closely related to the use of adjacent land areas, since some land uses generate more traffic than others. In addition, the attraction between different land uses varies with the intensity of development and the distance between those developed areas. It becomes necessary to designate land uses by type for transportation planning. An analysis of the existing and proposed land uses aids in identifying the future travel patterns for the area. Figure 2 illustrates the current and forecasted land use patterns for Wake County. The General Development Plan is from the Wake County Planning Department.

Traffic

Traffic projections are based on historical and anticipated population, economic growth patterns, land use, and traffic ADT trends. The traffic projections for each facility are included in the Appendix of this report.

GENERAL DEVELOPMENT PLAN

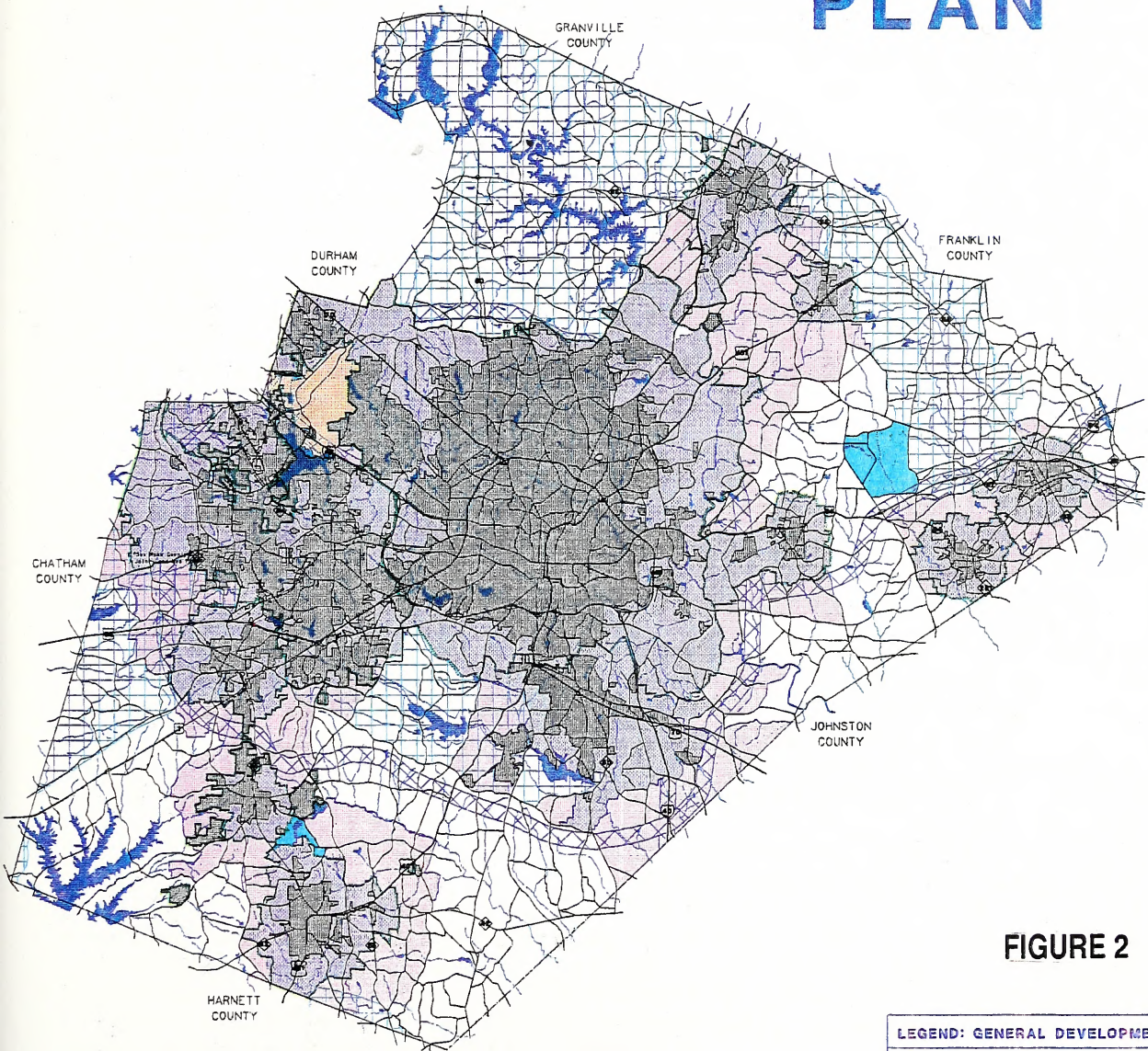


FIGURE 2

LEGEND: GENERAL DEVELOPMENT PLAN

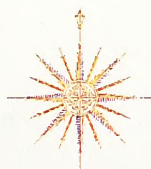
- MUNICIPAL CORPORATE LIMITS
- MUNICIPAL PLANNING BOUNDARIES
- ETJ
- PERIMUNICIPAL PLANNING AREA (PPA)
- PPA OF MUTUAL INTEREST
- RURAL PLANNING AREA
- WATER SUPPLY WATERSHED
- CRITICAL WWS BOUNDARY
- SPECIAL WATERSHED PLANNING AREA
- SPECIAL HIGHWAY PLANNING AREA
- AIRPORT PLANNING AREA
- PROPOSED PPA BOUNDARY

DATE: JANUARY 21, 1994

SCALE: 1" = 72,000'

DRAWN BY: WAKE COUNTY PLANNING DEPARTMENT

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COMPILED FROM BEST CURRENTLY AVAILABLE SOURCES. WAKE COUNTY
PLANNING DEPARTMENT ASSUMES NO RESPONSIBILITY FOR ERROR OR
FOR MISUSE OF THIS MAP.



Capacity, Width, and Alignment Deficiencies

Although minimum requirements are necessary for all roads serving the public, the ultimate design of a road will vary according to the desired **capacity** and **level of service (LOS)** to be provided. Universal standards in the design of thoroughfares are not practical. Each road or highway section must be individually analyzed and its design requirements determined by the amount and type of projected traffic, existing capacity, desired level of service, and available right-of-way.

Capacity is the maximum number of vehicles which has a "reasonable expectation" of passing over a given section of a roadway, during a given time period under prevailing roadway and traffic conditions. The relationship of traffic volumes to the capacity of the roadway will determine the **level of service**. Six levels of service identify the range of possible conditions. Table 3-C gives a brief description of each LOS in accordance with the 1985 Highway Capacity Manual.

The **level of service** of a road indicates the ease of movement experienced by motorists using the facility. The ability of a motorist to drive at a desired speed is dependent upon many factors. Included are the physical design of the road, the amount and character of traffic control devices, the influence and character of traffic generated by abutting property, and the imposed speed restrictions.

The recommended improvements and overall design of the Thoroughfare Plan were based on achieving a minimum of LOS D on existing facilities, and LOS C on new facilities. LOS D is considered the "**practical capacity**" of a facility, or that at which the public begins to express dissatisfaction.

For driver convenience, ease of operation, and safety, it would be desirable to widen all existing roads and highways to provide a minimum lane width of 12 feet. However, when considering overall statewide needs and available highway revenue, these levels of improvement applied statewide would be impractical. Therefore, it is necessary to establish minimum tolerable widths that would be economically feasible for existing roads with respect to traffic demands.

An analysis of the roads in Wake County was made to determine if the projected traffic (year 2015) would exceed the practical capacity of the system. These facilities are discussed in Chapter 4 of this report.

TABLE 3-C
LEVEL OF SERVICE

- LOS A** - describes primarily free flow conditions. The motorist experiences a high level of physical and psychological comfort. The effects of minor incidents or breakdowns are easily absorbed. On an urban arterial, LOS A corresponds to a average travel speed of 25 to 35 mph.
- LOS B** - also represents reasonably free flow conditions. The ability to maneuver within the traffic stream is only slightly restricted.
- LOS C** - provides for stable operations, but flows approach the range in which small increases will cause substantial deterioration in service. Freedom to maneuver is noticeably restricted. Minor incidents may still be absorbed, but the local decline in service will be great. Queues may be expected to form behind any significant blockage.
- LOS D** - borders on unstable flow. Small increases in flow can cause substantial deterioration in service. Freedom to maneuver is severely limited, and the driver experiences drastically reduced comfort levels. Minor incidents can be expected to create substantial queuing. On an urban arterial, LOS D corresponds to an average travel speed of 9 to 17 mph.
- LOS E** - The boundary between LOS D and LOS E describes operation at capacity. Operations at this level are extremely unstable, because there are virtually no usable gaps in the traffic stream. Any disruption to the traffic stream, such as a vehicle entering from a ramp, or changing lanes, requires the following vehicles to give way to admit the vehicle. This condition establishes a disruption wave which propagates through the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate any disruption. Any incident can be expected to produce a serious breakdown with extensive queuing.
- LOS F** - describes forced or breakdown flow. Such conditions generally exist within queues forming behind breakdown points.

4. THOROUGHFARE PLAN

Thoroughfare plans are developed for urban areas and counties to assist officials in the development of the most logical and appropriate street system that will meet the existing and future travel demands. The municipalities and county must cooperate as a team to develop an efficient system for travel throughout the County.

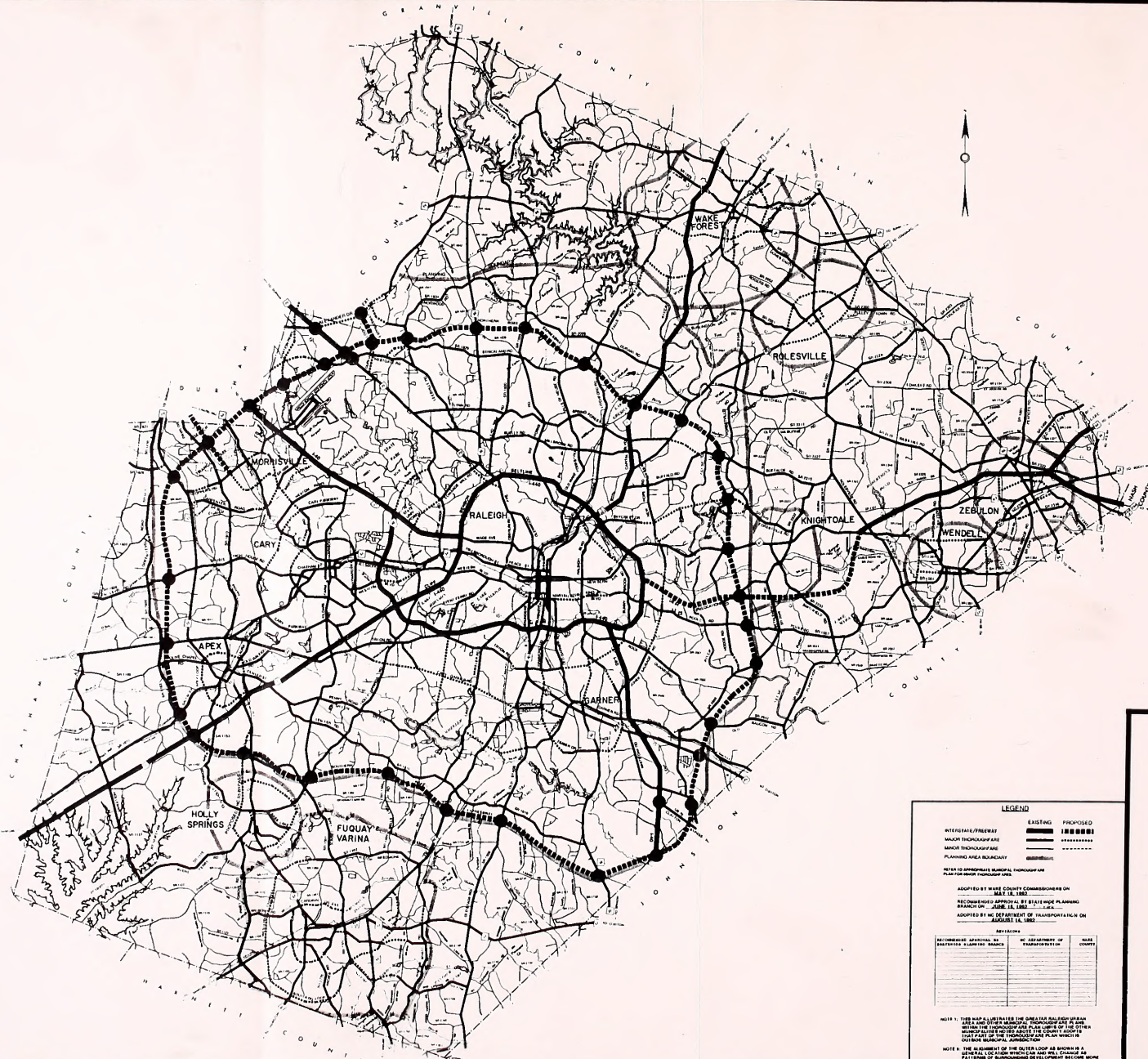
The GRUA (Greater Raleigh Urban Area) Thoroughfare Plan was developed in February 1986 and includes the City of Raleigh, and the Towns of Cary, Garner, Apex, and Morrisville. The latest revision to this plan was on October 1, 1993. In the locations where the planning area for the GRUA Report overlap with the Wake County Plan, the recommendations from the GRUA Report were applied, except where specifically noted.

As Wake County continues to grow and develop, it becomes more urban in nature. This growth results in a more complex and intertwined transportation system throughout Wake County. The greater the complexity of the system, the greater the need to provide an accurate model of the transportation patterns within the planning area. For this reason the MPO (Metropolitan Planning Organization) is in the process of expanding to include all of Wake County and is renamed the CAMPO (Capital Area Metropolitan Planning Organization). A comprehensive computer model update is underway to include not only all of Wake County, but the entire Triangle Region.

The thoroughfare plan outlines the transportation system network according to each roadway's function within the system. Each road in the thoroughfare plan was evaluated based on the following factors: alignment, capacity, width, number of lanes, traffic volume, and land use patterns. Suggestions for the improvement of roads are made based on these evaluated factors. Figure 3 shows the thoroughfare plan for Wake County. The Wake County Thoroughfare Plan addresses only the facilities outside the municipal planning areas. The main recommendations consist of the following:

Interstate/Freeway and Major Thoroughfares

Preliminary traffic projections on the following roads indicate that their practical capacities will be exceeded during the 25 year planning period. It is recommended that additional lanes be added to the following roads to increase capacity, speed, and safety, and to decrease congestion, accidents, and driver frustration.



LEGEND

INTERSTATE/FREEWAY		EXISTING		PROPOSED
MAJOR THOROUGHFARE		MAJOR THOROUGHFARE		
PLANNING AREA BOUNDARY		PLANNING AREA BOUNDARY		

AREA IS APPROPRIATE MUNICIPAL THOROUGHFARE
PLAN FOR MAJOR THOROUGHFARE

ADOPTED BY WAKE COUNTY COMMISSIONERS ON
MAY 18, 1982

RECOMMENDED APPROVAL BY STATE HIGHWAY PLANNING
BOARD ON - JUNE 18, 1982

ADOPTED BY NC DEPARTMENT OF TRANSPORTATION ON
AUGUST 18, 1982

REVISIONS	NO. DEPARTMENT OF TRANSPORTATION	WAKE COUNTY
1. INITIAL DESIGN BY		
2. INITIAL DESIGN BY		
3. INITIAL DESIGN BY		
4. INITIAL DESIGN BY		
5. INITIAL DESIGN BY		
6. INITIAL DESIGN BY		
7. INITIAL DESIGN BY		
8. INITIAL DESIGN BY		
9. INITIAL DESIGN BY		
10. INITIAL DESIGN BY		

NOTE 1: THIS MAP LIES WITHIN THE JURISDICTION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE NORTH CAROLINA DEPARTMENT OF HIGHWAY PLANNING AND DESIGN. THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE NORTH CAROLINA DEPARTMENT OF HIGHWAY PLANNING AND DESIGN HAVE REVIEWED THIS MAP AND HAVE APPROVED THE COUNTY'S ADAPTATION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE NORTH CAROLINA DEPARTMENT OF HIGHWAY PLANNING AND DESIGN'S THOROUGHFARE PLAN TO WAKE COUNTY.

NOTE 2: THE ALIGNMENT OF THE OUTER LOOP AS SHOWN IS A GENERAL LOCATION FOR WHICH THE ROAD WILL CHANGE AS PATTERNS OF SUBURBAN DEVELOPMENT BECOME MORE DENSE.

**THOROUGHFARE
PLAN
FOR
WAKE COUNTY
NORTH CAROLINA
MAY 1992**

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY PLANNING AND ENVIRONMENTAL BRANCH
TRANSPORTATION UNIT
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

1 2 3 4 5
MILES IN SCALE

FIGURE 3



I-40 Refer to the Greater Raleigh Urban Area (GRUA) Report.

US 1 From the Wake County Line to US 64 near Apex - This facility is shown as a freeway/expressway on the Wake County Thoroughfare Plan. In 1991 this facility carried approximately 9,000 vehicles per day (vpd) with the projected 2015 volumes reaching 30,000 vpd. This section is currently scheduled to be widened to a four lane divided facility starting in 1995 (TIP project R-2500).

From the proposed interchange with the Northern Wake Expressway to US 1A - This section is also shown as a freeway/expressway on the Wake County Thoroughfare Plan. It carried 18,000 -26,000 vpd in 1991 and is expected to carry in excess of 55,000 vpd in 2015. The proposed cross-section for this facility is a six lane divided section.

From US 1 to the Franklin County Line - A four lane divided facility is currently under construction (TIP project R-205).

US 64 From east of Jordan Lake in Chatham County to the merge of US 1 and US 64 in Cary - This facility carried approximately 9,000 vpd in 1991 and is projected to carry 27,000 - 30,000 vpd in 2015. This section of US 64 is currently under construction for a four lane divided facility (TIP project R-2318).

The Knightdale Bypass (TIP project R-2547), a proposed four lane divided freeway from I-440 (the beltline) to existing US 64 near SR 1003 (Rolesville Road), is scheduled to begin construction in the year 1996.

From existing US 64 at the Outer Loop to the proposed bypass east of Knightdale - This segment currently carries approximately 20,000 vpd with a projected volume in excess of 40,000 vpd. This section is proposed to be widened to an eight lane divided facility.

US 64 BUS From NC 97 to SR 2364 (Liles-Dean Drive) and from the Little River to SR 2348 (Barbee Street Ext.) - A four lane facility is recommended for these sections due to the traffic volumes projected for the design year 2015 ranging from 13,000 - 21,000 vpd. These sections were recommended to stay two lanes in the 1981 Wake County Plan.

US 70 From the Durham County Line to Duraleigh Road - This facility was the subject of a corridor study in March 1992. This study was jointly funded by the City of Raleigh, NCDOT, and property owners in the area. The study includes many recommendations for the corridor, including a local street network. The reader is referred to this report for further information. Copies are available for review at NCDOT-Statewide Planning and the City of Raleigh Transportation

Department. This facility is classified as a freeway/expressway on the Wake County Thoroughfare Plan from the Outer Loop to the Durham County Line.

- US 264** From US 64 to the Franklin County Line - This facility currently a four lane cross section. The future projected traffic for the design year is 25,000 vpd which can be adequately served by the existing roadway cross section and right-of-way width.
- US 264 A** From the Johnston County Line to NC 97 - The existing two lane cross section on this facility is adequate based on the design year traffic projected to be 4,500 vpd. This conforms to the recommendation in the Wake County Plan.
- US 401** From the Harnett County Line to the proposed US 401 Bypass around Fuquay-Varina - This section carried approximately 6,100 vpd in 1991. The proposed cross-section is five lanes and agrees with the Fuquay-Varina Thoroughfare Plan. (Refer to the Fuquay-Varina Plan for further information)

From US 1 North to SR 2044 (Ligon Mill Road) just north of the Falls of Neuse River - This section of US 401 is listed as TIP project R-2425 and is proposed to start construction of a six lane divided facility in 1995.

From SR 2044 to the Franklin County Line - This section is scheduled for right-of way acquisition in the year 1998 (TIP project R-2814). This section is proposed to be a multi-lane facility with traffic volumes projected to reach nearly 14,000 vpd.

- NC 39** From the Johnston County Line to the Franklin County Line - This facility is currently two lanes, except for a 0.5 mile segment that has a four lane cross section at the intersection with US 264. The two lane cross section is adequate for this facility due to the projected traffic volumes for the design year. However, it is recommended that the lanes be widened to twelve feet. This conforms to the Wake County Plan.
- NC 42** From the Harnett County Line to SR 1101 (Piney Grove Road) - This section of the facility is proposed to have a two lane cross section based on projected traffic for the design year of 6,200 vpd. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve feet. This recommendation is in conformity with the Wake County Plan.

From SR 1101 (Piney Grove Road) to SR 1103 (Fleming Road) in Fuquay-Varina - This section is proposed to have a five lane cross section to adequately serve the 11,000 vpd projected for the year 2015. This is revised from the 1981 Wake County Plan to conform with the Fuquay-Varina Thoroughfare Plan.

From SR 2754 (Kennebec Road) to SR 1006 (Old Stage Road) - This section also conforms to the Fuquay-Varina Plan and is proposed to be a four lane facility. This cross section will adequately serve the 12,500 vpd projected for the design year.

From SR 1006 (Old Stage Road) to the Johnston County Line - This section is proposed to have a two lane cross section. It is recommended that the existing lanes be widened to twelve feet. This cross section will adequately serve the 9,200 vpd projected for the design year.

NC 50 From SR 1829 (Strickland Road) to the Outer Loop - This section is proposed to have five lanes. This cross section is proposed due to the development through the area. This cross section is also adequate for the projected traffic volumes of 32,500 vpd. This is a slight variation to the four lanes proposed in the Wake County Plan, however, this does conform to the 1989 GRUA Report.

From the Outer Loop to NC 98 - This section is proposed to be a four lane divided section, which is a variation from the five lane section proposed in the GRUA Report. This four lane divided section is sufficient for the traffic volumes projected for the design year which range from 17,400 - 31,000 vpd.

From NC 98 to the Granville County Line - This section is proposed to remain a two lane facility, however, it is recommended that the lanes be widened to twelve feet. This cross section is adequate for the projected design year traffic volumes ranging from 6,100 - 8,500 vpd.

NC 54 Refer to the 1989 GRUA Report.

NC 55 From the Harnett County Line to US 401 in Fuquay-Varina - This section carried approximately 9,500 vpd in the year 1991 and is anticipated to experience volumes near 20,000 vpd in 2015. The proposed cross section for this facility is a four lane divided with curb and gutter.

The section of NC 55 from SR 1121 (O.C. Hester Road) in Fuquay-Varina to NC 55 Holly Springs bypass is currently under a feasibility study (TIP project R-2907). The Holly Springs Bypass (TIP project R-2541) is scheduled for construction in 1997.

From the Outer Loop to the Durham County Line - This segment is proposed to be a four lane divided cross section. This will accommodate the design year traffic volumes projected to be 36,500 vpd. This conforms to the Wake County Plan.

NC 96 From the Johnston County Line to the Franklin County Line - This section is a north-south route with approximately 1,800 - 4,500 vpd in 1991. With the 2015 volumes reaching 5,800 -

9,200, no lane additions should be necessary except within the Zebulon planning area.

- NC 97 From US 64 Bus to SR 2370 (Water Plant Road) - This segment is proposed to need widening within the design period by the design year. It is recommended to have a four lane cross section to serve the projected design year traffic of 13,700 vpd. This is an amendment to the 1981 Wake County Plan.

From US 264 to the Franklin County Line - This facility is proposed to remain a two lane cross section. It is also recommended to widen the lanes to twelve feet where necessary. This cross section will adequately serve the design year projected traffic volumes of 4,800 - 5,200 vpd.

- NC 98 From the Durham County Line to the Wake Forest Bypass - This facility carries approximately 8,100 vpd and is proposed to carry 17,000 - 20,000 vpd on a four lane divided section. This is an amendment to the 1981 Wake County Plan which recommended a two lane cross section.

The Wake Forest Bypass (TIP project R-2809) is a four lane divided facility scheduled for construction in 2000. This cross section will accommodate the projected design year traffic of 14,000 vpd.

From the Wake Forest Bypass to the Franklin County Line - Based on design year traffic projections for this segment, the existing two lane cross section is adequate for the proposed 9,000 vpd. It is recommended, however, that the lanes be widened to twelve feet.

- SR 1001 (Pearces Road) The capacity for this existing two lane road is adequate for projected future traffic volumes. No improvements are necessary, however, it is recommended that the lanes be widened to twelve feet.
- SR 1003 (Rolesville Road/Eagle Rock Road) From US 401 Relocation in Rolesville to US 64 A - Additional turn lanes may be required where there is significant development. However, two lanes should accommodate the design year traffic.
- SR 1004 (East Garner Road) The capacity for this section of two lane road is adequate for future traffic volumes. No major improvements are necessary, however, it is recommended that the road be widened to twelve foot lanes.
- SR 1005 (Six Forks Road) From SR 1829 (Strickland Road) to the Outer Loop - This is a primary radial accessing North Raleigh to the CBD. Traffic volumes of 31,000 vpd projected for the design year 2015 warrant five lanes with a center left turn lane due to development through the area.

From the Outer Loop to NC 98 - There is not as much existing development through this area. For this section, four lanes with a median are proposed due to the design year traffic projections ranging from 8,500 - 24,000 vpd.

SR 1006 (Old Stage Road) From the Johnston County Line to the Outer Loop - Future traffic volumes 6,300 vpd only warrant a two lane facility. This cross section is in conformity with the Wake County Plan.

From the Outer Loop to SR 1010 - This portion of the road serves as a primary land access route for the southern part of Garner. Future traffic volumes of 18,000 vpd warrant a four lane facility for this section. This is also in conformity with the 1989 GRUA Report and the Wake County Plan.

SR 1007 (Poole Road) From the Outer Loop to the Town of Wendell- This facility serves as a major radial into Raleigh from the east. The traffic volumes in 1991 range from 2,500 - 4,500 vpd. The future volumes for the year 2015 are expected to range from 5,100 - 9,200. Although the current two lanes should accommodate the future traffic volumes, spot widening will be necessary where development occurs. The US 64 Bypass around Knightdale runs parallel and to the north of Poole Road, and should receive the majority of the traffic that might burden Poole Road.

SR 1010 (Ten Ten Road) Refer to the GRUA Report.

SR 1011 (North Salem Street) From the Chatham County Line to SR 1163 (Kelly Road) - The capacity for this section of two lane road is adequate for future traffic volumes which are projected to be 6,000 vpd. No major improvements are necessary, however, it is recommended that the road be widened to twelve foot lanes.

From SR 1163 (Kelly Road) to the Outer Loop - Traffic volumes of 7,000 vpd projected for the design year also warrant a two lane facility. In addition, this segment recommends a cross section that provides on street parking on both sides. This conforms to the GRUA Report.

SR 1101 (Piney Grove Road) From the Harnett County Line to SR 1115 (Avent Ferry Road) - Future traffic volumes on this facility warrant a two lane cross section. This road runs north-south and is located west of the Town of Fuquay-Varina. It is also parallel to NC 55 which should receive the majority of the traffic traveling through this area.

SR 1115 (Avent Ferry Road) From SR 1101 (Piney Grove Road) to SR 1127 (Holleman Road) - This facility is proposed to be a two lane roadway which will accommodate the low traffic volumes projected for the design year 2015. No major improvements

are necessary, however, it is recommended that the lanes be widened to twelve foot lanes.

SR 1127 (Holleman Road) From SR 1115 (Avent Ferry Road) to SR 1101 (Piney Grove Road) - This facility is proposed to be two lanes due to the low traffic volumes projected for the design year 2015. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes.

SR 1141 (New Hill-Olive Church Road) From SR 1011 North Salem Street) to the Chatham County Line - The 1991 volumes range from 700 -900 vpd with the 2015 volumes ranging from 2,800 - 3,600 vpd. With these low volumes, the facility will need only a two lane cross section. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes.

SR 1152 (Holly Springs Road) From SR 1393 (Bass Lake Road) to the Outer Loop - A four lane cross section is recommended for this segment rather than a two lane cross section, which was recommended by the Wake County Plan. This cross section will accommodate the 12,500 vpd which is the projected traffic volumes for the design year.

From the Outer Loop to SR 1010 (Ten Ten Road) - To meet future traffic demand of 17,700 vpd, a five lane cross section is recommended for this segment. This also conforms to the GRUA Report.

SR 1153 (Old Holly Springs - Apex Road) From SR 1152 (Holly Springs Road) to SR 1154 (Woods Creek Road) - This section is currently a dirt road and is proposed to be upgraded to a two lane paved facility. This conforms to the Wake County Plan.

From SR 1154 (Woods Creek Road) to US 1 - This section is proposed to be upgraded to a two lane facility with on street parking on both sides.

SR 1163 (Kelly Road) From SR 1011 (North Salem Street) to SR 1160 (Olive Chapel Road) - This section is proposed to be a four lane facility that runs parallel to the southwestern portion of the Outer Loop just west of the Town of Apex.

SR 1301 (Sunset Lake Road) From NC 55 to SR 1393 (Bass Lake Road) - This segment is proposed to be four lanes which will accommodate design year traffic projected to range from 8,300 - 11,300 vpd. This cross section conforms to the Fuquay-Varina Plan and the Holly Springs Plan.

SR 1600 (Green Level Church Road) From SR 1163 (Kelly Road) to the Proposed Extension - This section is proposed to be four lanes, which conforms to the 1989 GRUA Report for the Town of Cary's Transportation Plan.

From the Proposed Extension to the Chatham County Line - This section is proposed to be three lanes and also conforms to the 1989 GRUA Report.

SR 1605 (Green Level Road West) From the Chatham County Line to SR 1615 (High House Road) - This section is proposed to be four lanes. This road runs parallel to US 64 West and is proposed to have an interchange at the Outer Loop, therefore, it will serve a significant amount of traffic.

SR 1615 (High House Road) From SR 1605 (Green Level Road West) to Outer Loop - This segment is proposed to be a four lane facility. This facility will connect SR 1605 to the Outer Loop.

SR 1625 (Green Level Road) From SR 1600 (Green Level Church Road) to SR 1628 (O'Kelly Chapel Road) - A four lane road is proposed for this facility which conforms to the 1989 GRUA Report for the Town of Cary's Transportation Plan. This facility also runs parallel to the western portion of the Outer Loop, therefore, providing access to properties adjacent to the Outer Loop.

From SR 1628 to SR 1630 - A three lane facility is proposed for this segment which conforms to the 1989 GRUA Report for the Town of Cary's Transportation Plan.

SR 1628 (O'Kelly Chapel Road) From the Chatham County Line to SR 1625 (Green Level Road) - This facility is proposed to have a three lane cross section. It will also have direct access to NC 55 after completion of the proposed extension.

SR 1630 (Alston Avenue) From SR 1625 (Green Level Road) to the Proposed Extension - This segment is recommended to have a three lane cross section to accommodate design year traffic. This segment also runs parallel to the western portion of the Outer Loop and will serve as a connector to the Outer Loop for adjacent property owners.

From the Proposed Extension to the Durham County Line - This segment is proposed to have a four lane cross section to serve design year traffic. This segment also runs parallel to NC 55.

SR 1834 (Norwood Road) From the Outer Loop to SR 1005 (Six Forks Road) - This road is proposed to be a two lane facility due to traffic volumes projected for the design year. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. This conforms to the Wake County Plan.

SR 1844 (Mt. Vernon Church Road) From SR 1834 (Norwood Road) to SR 1005 (Six Forks Road) - This road is proposed to be a two

lane facility due to the low traffic volumes projected for the design year. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. There was not a cross section recommended for this facility in the Wake County Plan.

SR 1901 (Carpenter Pond Road) From the Granville County Line to NC 50 - This segment is proposed to have a two lane cross section due to the traffic volumes of 8,000 vpd projected for the design year. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. This facility does not have a recommended cross section in the Wake County Plan.

SR 1907 (New Light Road) From Granville County Line to NC 98 -It is recommended that this facility have a two lane cross section based on future traffic volumes projected to range from 4,500 - 6,500 vpd. It is also recommended that the lanes be widened to twelve feet. Since this road crosses Fall Lake, special attention should be given to the environmental aspects. This road also serves as a connector for SR 1005 (Six Forks Road) to northern Wake County. This recommendation is in conformity with the Wake County Plan.

SR 1909 (Purnell Road) From SR 1907 (New Light Road) to US 1 - This segment is proposed to be a two lane facility based on future traffic volumes for 2015 of 3,500 vpd. This road crosses Falls Lake, therefore, special attention should be given to the environmental aspects. No major improvements are necessary for the roadway, however, it is recommended that the lanes be widened to twelve foot lanes. This is in conformity with the Wake County Plan.

SR 1942 (Oak Grove Church) From NC 96 to the proposed Wake Forest Loop - This facility is proposed to have a two lane cross section which will accommodate design year traffic. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. This is in conformity with the Wake County Plan.

SR 2000 (Falls of Neuse Road) From SR 1829 (Strickland Road) to the Outer Loop - This section is projected to experience traffic volumes of 33,000 vpd by the year 2015. It is proposed to be widened to a five lane facility which will accommodate the projected traffic for the design year.

From the Outer Loop to the NC 98 Bypass of Wake Forest - This section is proposed to be widened to a four lane divided facility with curb and gutter. Volumes are projected to reach 36,000 in the year 2015. These volumes seem quite extreme considering the traffic count for 1991 was only 5,600 vpd; however, with the County's land use plan and the tremendous development proposed in the area between Raleigh

and Wake Forest, these future volumes are not unrealistic. This cross section differs from the GRUA Report, however, refer to the GRUA Report for information south of Strickland Road.

SR 2006 (Durant Road) From SR 1005 (Six Forks Road) to SR 2000 (Falls of Neuse Road) - This section is proposed to be a four lane facility due to the projected traffic being 13,800 vpd for the design year. Since this facility runs parallel to the Outer Loop, it also serves as an access road for properties adjacent to the Outer Loop. This cross section differs from the 1989 GRUA Report which recommends a two lane cross section.

From SR 2000 (Falls of Neuse Road) to US 401 North - This section is proposed to be a five lane facility. The future traffic projected for the design year is 15,400 vpd which will be accommodated by the recommended cross section.

SR 2215 (Buffaloe Road) From the Outer Loop to SR 2234 (Mark's Creek Road) - This section is proposed to be upgraded to a five lane cross section which will accommodate the projected traffic volumes of 19,000 vpd for the year 2015. This facility will tie into the section proposed in the 1989 GRUA Report. This does not conform to the two lane cross section recommended in the 1981 Wake County Plan.

SR 2224 (Mitchell Mill Road) From US 401 to SR 1003 (Rolesville Road) - This segment is proposed to be widened to a three lane cross section due to the projected traffic volumes of 18,200 vpd for the design year 2015. This differs from the two lane cross section recommended in the Wake County Plan.

From SR 1003 (Rolesville Road) to SR 2215 (Buffaloe Road) - This segment is recommended to have a two lane cross section due to the low traffic volumes projected for the design year of 4,600 vpd. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. This conforms to the Wake County Plan.

SR 2320 (Riley Hill Road) From SR 1003 (Rolesville Road) to NC 97 - This segment is recommended to have a two lane cross section due to the traffic volumes projected for the design year ranging from 3,700 - 6,800 vpd. No major improvements are necessary, however, it is recommended that the lanes be widened to twelve foot lanes. This conforms to the Wake County Plan.

SR 2329 (Marshburn Road/Lizard Lick Road) From SR 2308 (Fowlers Road) to SR 2364 (Liles-Dean Drive) - This segment is proposed to be a two lane cross section due to the low traffic volumes projected for the design year. No major improvements are necessary, however, it is recommended that

the lanes be widened to twelve foot lanes. This conforms to the Wake County Plan.

SR 2349/SR 2353 (Morphus Bridge Road) This facility connects the Towns of Wendell and Zebulon. It is proposed to be a two lane cross section with lanes widened to twelve feet. This recommendation is in conformity with the Wake County Plan.

SR 2406 (Old US 64 East) This facility is an old US route, and still carries a significant amount of traffic for a two lane road. No major improvements are necessary due to the projected traffic being within the design range for a two lane facility. However, it is recommended that the lanes be widened to twelve feet. This recommendation conforms with the Wake County Plan.

SR 2542 (Old Baucom Road) This road is recommended to be a two lane facility, therefore, no major improvements are necessary. This is in conformity with the Wake County Plan. However, it is recommended that the lanes be widened to twelve feet. This road is proposed to have an interchange with the Outer Loop. Therefore, beyond the design year there is potential for a greater amount of growth on this facility.

SR 2555 (Auburn-Knightdale Road) This segment is recommended to have a two lane cross section with no major improvements. However, it is recommended that the lanes be widened to twelve feet. Also, this road is proposed to have an interchange with the Outer Loop. Therefore, beyond the design year there is potential for a greater amount of growth on this facility. This facility does not appear in the Wake County Plan.

SR 2700 (White Oak Road) This segment is proposed to have an interchange with the Outer Loop. Therefore, beyond the design year there is potential for a greater amount of growth on this facility. It also provides direct access to Johnston County. It is recommended to have a two lane cross section with no major improvements, except widening the lanes to twelve feet. This conforms to the recommendation of the Wake County Plan.

There are several thoroughfares that were not discussed in this chapter. These are existing two lane facilities that require no major improvements, however, it is recommended that the lanes be widened to twelve feet. These facilities are presented in the street tabulation located in the Appendix of this report.

5. IMPLEMENTATION

Implementation is one of the most important aspects of the transportation plan. Unless implementation is an integral part of this process, the effort and expense associated with developing the plan is lost. There are several tools available for use by the County to assist in the implementation of the thoroughfare plan. They are as follows:

State-County Adoption of Thoroughfare Plan

Wake County and the North Carolina Department of Transportation has mutually approved the thoroughfare plan shown in Figure 3. The mutually approved plan now serves as a guide for the Department of Transportation in the development of the road and highway system for the County. The approval of the plan by the County also enables standard road regulations and land use controls to be used effectively in the implementation of this plan.

Subdivision Controls

Subdivision regulations require every subdivider to submit to the County Planning Commission a plan of any proposed subdivision. It also requires that subdivisions be constructed to certain standards. Through this process, it is possible to require the subdivision streets to conform to the thoroughfare plan and to reserve or protect necessary rights-of-way for projected roads and highways that are to become a part of the thoroughfare plan. The construction of subdivision streets to adequate standards reduces maintenance costs and simplifies the transfer of streets to the State Highway System. Appendix B outlines the recommended subdivision design standards as they pertain to road construction.

Land Use Controls

Land use regulations are an important tool in that they regulate future land development and minimize undesirable development along roads and highways. The land use regulatory system can improve highway safety by requiring sufficient setbacks to provide for adequate sight distances and by requiring off-street parking.

Development Reviews

Driveway access to a State-maintained street or highway is reviewed by the District Engineer's office and by the Traffic Engineering Branch of the North Carolina Department of Transportation. In addition, any development expected to

generate large volumes of traffic (e.g., shopping centers, fast food restaurants, or large industries) may be comprehensively studied by staff from the Traffic Engineering Branch, Planning and Environmental Branch, and/or Roadway Design Unit of NCDOT. If done at an early stage, it is often possible to significantly improve the development's accessibility while preserving the integrity of the thoroughfare plan. Since the County is the first point of contact for developers, it is important that the County advise developers of this review requirement and cooperate in the review process.

Funding

The majority of improvements to the State highway system are scheduled and funded by the Transportation Improvement Program. The Board of Transportation regularly conducts public meetings to obtain input from the public pertaining to their needs for highway improvements.

However, not all roadway improvements are covered by this procedure. Nearly all secondary road work is done on a county by county basis. These funds, known as the county construction account, are used to pave unimproved roads, widen roadways, stabilize dirt roads, make minor alignment improvements, and even construct short connectors when appropriate. The Wake County Commissioners are encouraged to work with the NCDOT Division Engineer when the County's priority list is developed. Many of the minor improvements recommended may be realized by using the County's construction account funds and developing the County's priority list in conjunction with the Division Engineer.

Other Funding Sources

- (1) Continue to work with NCDOT to have local projects included in the Transportation Improvement Program (TIP).
- (2) Lobby for the use of Discretionary Funds, which are funds that the Board of Transportation member may use at his or her discretion for area road projects.
- (3) Request Industrial Access Funds, which are state funds for the construction of access roads to large industries.

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT		Rdwy fig	ROW ft
					1991	2015		
I - 40 (see the GRUA Report)								
US 1 South								
Chatham Co. - O. Loop	7.20	24	260 VR	11000	6900	17400	B	200 min
US 1 North								
*O. Loop - Neuse River	2.98	48	200	35000	26400	60000	N	300
*Neuse River - US 1A	2.50	48	250	35000	18000	55000	N	300
US 1A - Franklin Co.	4.96	24	200	11000	14000	35000	B	ADQ
US 64 West								
Chatham Co. - O. Loop	3.26	24	200 VR	11000	9000	30000	B	ADQ
US 64 East								
*O. Loop - US 64 Bus	4.51	48	350	27000	35200	46000	E	ADQ
US 64 Bus - Little River	5.10	48	200	35000	21000	38000	ADQ	ADQ
Little River - US 264	2.51	48	290	35000	19000	36000	ADQ	ADQ
US 264 - Franklin Co.	2.29	48	290	35000	10000	18000	ADQ	ADQ
US 64 Bus								
US 64 - NC 97	1.68	48	170	27000	10500	21000	ADQ	ADQ
*NC 97 - SR 2364	0.73	24	60	11000	8000	18000	H	70
*Little River - SR 2348	0.94	24	60	11000	5500	13000	H	70
*US 70 West								
O. Loop - Durham Co.	2.30	48	180	35000	27000	88400	10L	200
US 70 East								
Johnston Co. - O. Loop	1.65	48	200	35000	27000	35000	ADQ	ADQ
US 70 Bypass (proposed)								
I-40 - Johnston Co.	--	--	--	37000	--	44000	B	200
US 264								
US 64 - Franklin Co.	2.98	48	410	35000	8800	25000	ADQ	ADQ
US 264A								
Johnston Co.- NC 97	2.00	24	60	11000	1700	4500	L	ADQ
US 401 South								
*Harnett Co. - SR 1100	1.40	24	60	11000	6100	15800	D	100
401 Bypass - O. Loop	3.36	48	150	35000	15100	34500	48	ADQ
O. Loop - SR 1010	0.76	48	150	35000	21200	46200	72	ADQ
US 401 North								
O. Loop - 401Bypass	4.80	20	60	10000	15600	34000	B	150
NC 96 - Franklin Co.	2.45	24	60	11000	7000	16700	B	150

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT		Rdwy fig	ROW ft
					1991	2015		
NC 39								
Johnston Co. - R/R	0.44	20	60	10000	1200	3800	L	70
R/R - US 264	0.52	40	100	10000	1400	4500	L	ADQ
US 264 - Franklin Co.	1.90	21	60	10000	1600	5200	L	70
NC 42 West								
Harnett Co. - SR 1101	0.71	20	60	10000	2400	6200	L	70
*SR 1101 - SR 1103	0.79	20	60	10000	4300	11000	D	90
NC 42 East								
*SR 2754 - SR 1006	2.47	20	100	10000	3600	12500	H	ADQ
SR 1006 - Johnston Co.	4.49	20	100	10000	3600	9200	L	ADQ
NC 50 North-West (Creedmoor Rd)								
*SR 1829 - O. Loop	1.10	48	100	27000	12100	32500	D	ADQ
O. Loop - SR 1834	1.70	22	60	11000	12100	31000	B	150
SR 1834 - NC 98	3.16	24	60	11000	6800	17400	B	150
NC 98 - SR 1831	1.56	20	60	10000	3700	8500	L	70
SR 1831 - Falls Lake	1.04	24	230	11000	3000	6800	L	ADQ
Falls Lake - Granville Co.	3.53	20	60	10000	3000	6100	L	70
NC 50 South-East								
Johnston Co. - O. Loop	0.90	24	100	11000	4200	9800	L	ADQ
NC 54								
(see the GRUA Report)								
*NC 55 South								
Harnett Co. - SR 2767	2.19	28	60	11000	9500	19200	G	100
NC 55 North								
O. Loop - Durham Co.	2.30	26	150	11000	8200	36500	B	150
NC 96								
Johnston Co. - SR 2347	1.33	20	60	10000	1800	5800	L	70
SR 2337 - Franklin Co.	11.68	22	100	11000	4500	9200	L	ADQ
NC 97								
*US 64 Bus. - SR 2370	3.24	22	100	11000	6000	13700	H	ADQ
US 264 - NC 39	1.18	24	100	11000	2300	5200	L	ADQ
NC 39 - Franklin Co.	0.49	21	60	10000	2000	4800	L	70
NC 98								
*Durham Co. - NC 98 Byp.	8.40	24	120	11000	8100	17500	B	150
*SR 2053 - SR 1945	2.17	20	60	10000	4800	14000	H	70
SR 1945 - Franklin Co.	1.97	20	60	10000	3600	9000	L	70
SR 1001 (Pearces Rd)								
Franklin Co. - SR 2320	3.92	18	60	9000	1600	3100	L	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT 1991	ADT 2015	Rdwy fig	ROW ft
SR 1003 (Rolesville Rd)								
US 401 relocation in Rolesville - US 64 A	9.14	20	60	10000	3400	9800	L	70
SR 1003 (Eagle Rock Rd)								
US 64 A - Johnston Co.	4.52	20	60	10000	1700	3500	L	70
SR 1004 (East Garner Rd)								
Johnston Co. - SR 2555	2.78	20	60	10000	2800	7200	L	70
SR 1005 (Six Forks Rd)								
NC 98 - SR 2005 Ext.	2.90	20	60	10000	2700	8500	G	100
*SR 2005 Ext. - O.Loop	2.33	24	60	11000	9500	24000	G	100
O. Loop - SR 1829	1.00	24	60	11000	12100	31000	D	90
SR 1006 (Old Stage Rd)								
Johnston Co. - O.Loop	8.50	18	60	9000	2400	6300	L	70
*O.Loop - SR 1010	0.50	18	60	9000	5000	18000	H	70
SR 1007 (Poole Rd)								
O.Loop - SR 2233	3.20	22	60	11000	4500	9200	L	70
SR 2233 - SR 2360	4.09	20	60	10000	2500	5100	L	70
SR 1011 (North Salem St)								
Chatham Co. - SR 1163	6.42	22	60	11000	1900	6000	L	70
*SR 1163 - O. Loop	0.20	22	60	11000	1900	7000	J	70
SR 1010 (Ten Ten Rd)								
(see the GRUA Report)								
SR 1101 (Piney Grove Rd)								
Harnett Co. - NC 42	1.48	20	60	10000	1600	3300	L	70
NC 42 - SR 1115	4.85	18	60	9000	2300	4700	L	70
SR 1115 (Avent Ferry Rd)								
SR 1101 - SR 1127	4.41	18	60	9000	800	2000	L	70
SR 1127 (Holleman Rd)								
SR 1115 - Harris Lake	1.04	20	60	10000	500	2000	L	70
Harris Lake - SR 1011	3.86	18	60	9000	1500	3000	L	70
SR 1141 (New Hill-Olive Ch Rd)								
SR 1011 - SR 1143	2.60	18	60	9000	900	3600	L	70
SR 1143 - SR 1165	0.70	18	200	9000	700	2800	L	ADQ
SR 1165 - Chatham Co.	1.20	18	60	9000	700	2800	L	70
*SR 1152 (Holly Springs Rd)								
SR 1393 - O.Loop	1.82	19	60	9000	2300	12500	H	70
O.Loop - SR 1010	2.32	19	60	9000	5500	17700	D	90

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT 1991 2015	Rdwy fig	ROW ft	
SR 1153 (Old H.SP - Apex Rd)								
SR 1152 - SR 1154	1.64	Dirt	60	5000	70	3000	L	70
*SR 1154 - SR 1177	1.60	Dirt	60	5000	200	8000	J	70
*SR 1177 - US 1	0.10	18	60	9000	200	8000	J	70
SR 1160 (Olive Chapel Rd)								
SR 1141 - SR 1163	3.12	18	60	9000	800	4500	L	70
*SR 1163 - O. Loop	0.70	18	60	9000	1000	6000	H	90
SR 1163 (Kelly Rd)								
SR 1011 - SR 1160	2.10	18	60	9000	NA	NA	H	70
SR 1160 - SR 1600	1.30	Dirt	60	5000	NA	NA	H	70
*SR 1301 (Sunset Lake Rd)								
NC 55 - SR 1302	1.48	20	60	5000	200	8500	H	70
SR 1302 - SR 1152	1.08	20	60	10000	1600	9200	H	70
SR 1152 - SR 1393	3.06	18	60	9000	3000	11300	H	70
SR 1375 (Lake Wheeler Rd)								
SR 1393 - SR 1010	3.42	20	60	10000	2100	5500	L	70
SR 1386 (Bells Lake Rd)								
SR 1404 - SR 1010	2.64	20	60	10000	1300	4200	L	70
SR 1404 (Johnson Pond Rd)								
SR 1393 - SR 1386	0.98	18	60	9000	1500	3500	L	70
*SR 1600 (Green Level Ch Rd)								
SR 1163 - SR 1621	3.28	18	60	9000	NA	NA	H	70
SR 1621 - Proposed Ext.	0.20	20	60	10000	NA	NA	H	70
Proposed Ext. - Chatham Co.	2.13	20	60	10000	NA	NA	I	70
*SR 1605 (Green Level Rd West)								
Chatham Co. - SR 1600	1.96	18	60	9000	800	NA	H	70
SR 1600 - SR 1615	0.24	18	60	9000	1200	NA	H	70
*SR 1615 (High House Rd)								
SR 1605 - O. Loop	0.60	18	60	9000	1200	3100	H	70
*SR 1625 (Green Level Rd)								
SR 1600 - Proposed Ext.	0.30	24	60	10000	200	NA	H	70
Proposed Ext.	0.50	--	--	--	--	--	H	70
Proposed Ext. - Beg. Pave	0.40	Dirt	60	5000	200	NA	H	70
Beg. Pave - End Pave	0.20	20	60	10000	200	NA	H	70
End Pave - SR 1628	1.18	Dirt	60	5000	200	NA	H	70
SR 1628 - SR 1630	0.22	Dirt	60	5000	300	NA	I	70
*SR 1626 (Yates Store Rd)								
Chatham Co. - SR 1625	1.00	20	60	10000	400	NA	H	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing			Capacity (LOS D) Current	Volumes		Recommended	
	X-Section				X - Section			
	Dist mi	Rdwy ft	ROW ft		ADT 1991 2015	Rdwy fig	ROW ft	
*SR 1628 (O'Kelly Chapel Rd)								
Chatham Co. - SR 1625	0.60	Dirt	60	5000	NA	NA	I	70
Proposed Ext.	0.34	--	--	--	--	--	I	70
*SR 1630 (Alston Ave)								
SR 1625 - Proposed Ext.	0.35	20	60	10000	300	NA	I	70
Proposed Ext.	0.30	--	--	--	--	--	H	70
Proposed Ext. - Durham Co.	1.60	20	60	10000	300	NA	H	70
*SR 1631 (Wake Rd)								
Chatham Co. - SR 1630	0.59	20	60	10000	200	NA	I	70
SR 1831 (Old Creedmore Rd)								
NC 98 - Durham Co.	1.77	20	60	10000	1000	4500	L	70
SR 1834 (Norwood Rd)								
O. Loop - SR 1005	5.16	18	60	9000	5000	12800	L	70
SR 1844 (Mt. Vernon Ch Rd)								
SR 1834 - SR 1005	2.02	20	60	9000	2700	9800	L	70
SR 1901 (Carpenter Pond Rd)								
Granville Co. - Falls Lake	0.62	24	160	11000	1800	8000	L	ADQ
Falls Lake - NC 50	0.43	18	150	9000	1800	8000	L	ADQ
SR 1901 (Old Weaver Tr Rd)								
NC 50 - Little Beaverdam Cr	2.81	24	150	11000	500	2500	L	ADQ
Little Beaverdam - SR 1907	1.30	18	60	9000	500	2500	L	70
SR 1907 (New Light Rd)								
Granville Co. - Falls Lake	4.21	18	200	9000	1500	4500	L	ADQ
Falls Lake - SR 1908	0.75	24	200	11000	1500	4500	L	ADQ
SR 1908 - NC 98	0.82	18	100	9000	2000	6500	L	ADQ
SR 1909 (Purnell Rd)								
SR 1907 - US 1	8.20	18	60	9000	1200	3500	L	70
SR 1917 (Stony Hill Rd)								
SR 1909 - NC 98	2.49	18	60	9000	1400	3400	L	70
*SR 1923 (Thompson Mill Rd)								
SR 1909 - SR 1926	0.61	20	60	10000	800	2000	L	70
SR 1926 (Jenkins Rd)								
SR 1923 - US 1	1.56	20	60	10000	650	3500	L	70
SR 1942 (Oak Grove Ch. Rd)								
NC 96 - Proposed W.F. Loop	2.15	18	60	9000	400	3500	L	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT 1991	ADT 2015	Rdwy fig	ROW ft
SR 1945 (Averette Rd)								
NC 98 - SR 2053	1.38	18	60	9000	700	2500	L	70
SR 2000 (Falls of Neuse Rd)								
Strickland Rd - O. Loop	1.04	20	60	10000	12800	33000	D	90
*O. Loop - NC 98 Bypass (including realignment)	6.26	20	60	10000	5600	36000	G	110
*SR 2005 (Honeycutt Rd)								
SR 2000 - SR 2006	1.30	18	60	9000	3600	13000	H	70
SR 2006 - SR 2002	3.00	18	60	9000	2500	7500	L	70
SR 2002 - SR 1005	0.20	--	--	--	--	--	L	70
*SR 2006 (Durant Rd)								
SR 1005 - SR 2000	3.04	20	60	10000	3400	13800	H	90
SR 2000 - US 401 North	4.16	18	60	9000	6000	15400	D	90
SR 2044 (Ligon Mill Rd)								
SR 2045 - Smith's Creek	0.65	20	60	10000	900	3500	L	70
SR 2045 (Burlington Mills Rd)								
SR 2049 - US 1	2.62	18	60	9000	3900	10000	L	70
SR 2049 (Forestville Rd)								
US 1A in W.F. - US 401	4.92	19	60	9000	1400	4100	L	70
SR 2217 -SR 2228	1.93	20	60	10000	1800	6000	L	70
SR 2051 (Burlington Mills Rd)								
SR 2049 - US 401	2.17	18	60	9000	1700	3500	L	70
SR 2053 (Jones Dairy Rd)								
NC 98 - SR 1945	2.90	18	60	9000	2600	5500	L	70
*SR 2215 (Buffaloe Rd)								
O. Loop - SR 2234	4.40	18	60	9000	5900	19000	D	90
SR 2217 (Old Milburnie Rd)								
SR 2049 - SR 1003	5.67	18	60	9000	2300	7400	L	70
SR 2224 (Mitchell Mill Rd)								
*US 401 - SR 1003	4.48	20	60	10000	7100	18200	I	70
SR 1003 - NC 96	4.69	18	60	9000	1600	4600	L	70
SR 2231 (Horton Rd)								
SR 2232 - SR 2215	0.78	20	60	10000	1500	4500	L	70
SR 2232 (Old Knight Rd)								
SR 2049 - SR 2231	1.38	18	60	9000	1800	5000	L	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT		Rdwy fig	ROW ft
SR 2233 (Smithfield Rd)								
SR 2513 - SR 2506	2.90	18	60	9000	1500	5800	L	70
SR 2234 (Mark's Creek Rd)								
SR 2215 - SR 1003	0.40	18	60	9000	2000	5800	L	70
SR 2300 (Pulley Town Rd)								
US 401 - SR 2301	2.50	18	60	9000	600	2500	L	70
SR 2303 (Halifax Rd)								
NC 96 - Franklin Co.	2.20	18	60	9000	1500	3800	L	70
SR 2308 (Fowlers Rd)								
SR 1003 - NC 96	4.80	18	60	9000	900	2300	L	70
SR 2320 (Riley Hill Rd)								
SR 1003 - NC 96	7.08	18	60	9000	3000	6800	L	70
US 64 - NC 97	1.22	18	60	9000	1800	3700	L	70
SR 2329 (Lizard Lick Rd)								
SR 2308 - SR 2320	2.90	20	60	10000	700	1400	L	70
SR 2329 (Marshburn Road)								
SR 2320 - US 64	1.18	18	60	9000	2100	4500	L	70
US 64 - SR 2364	2.36	18	60	9000	2800	6400	L	70
SR 2345 (Chamblee Rd)								
R/R - Johnston Co.	2.03	19	60	9000	800	1700	L	70
SR 2349 (Morphus Bridge Rd)								
SR 2351 - SR 2352	1.74	18	60	9000	1500	2900	L	70
SR 2353 (Morphus Bridge Rd)								
SR 2354 - SR 2352	0.85	18	60	9000	1500	4000	L	70
SR 2358 (Lake Glad Rd)								
SR 2361 - SR 1003	1.00	18	60	9000	1600	4800	L	70
SR 2406 (Old US 64 E)								
Franklin Co. - SR 2342	2.58	20	100	10000	3300	6700	L	ADQ
SR 2506 (Major Slade Rd)								
SR 2509 - SR 2233	0.40	18	60	9000	400	2500	L	70
SR 2509 (Mine Plantation Rd)								
Johnston Co. - SR 2510	3.10	20	60	10000	1400	3000	L	70
SR 2510 - SR 2506	0.30	36	60	11000	1400	3000	L	70
SR 2542 (Old Baucom Rd)								
O. Loop - SR 2509	3.0	18	60	9000	1100	5500	L	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (ENGLISH)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist mi	Rdwy ft	ROW ft		ADT 1991	2015	Rdwy fig	ROW ft
SR 2555 (Auburn-K'dale Rd) O. Loop - SR 2511	1.55	20	60	10000	1400	6000	L	70
SR 2556 (Rock Quarry Rd) SR 1004 - SR 2542	0.93	20	60	10000	1200	3500	L	70
SR 2700 (White Oak Rd) Johnston Co. - O. Loop	0.60	18	60	9000	700	2800	L	70
SR 2754 (Kennebec Rd) SR 2762 - SR 2758	0.23	18	60	9000	500	1300	L	70
SR 2758 (Bud Lipscomb Rd) SR 2754 - SR 1006	2.00	18	60	9000	400	1300	L	70
SR 2770 (Angier Rd) Harnett Co. - SR 2767	2.40	18	60	9000	1800	4100	L	70

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	ADT 2015	Rdwy fig	ROW m
I - 40 (see the GRUA Report)								
US 1 South								
Chatham Co. - O. Loop	12.00	7.2	78 VR	11000	6900	17400	B	60 min
US 1 North								
*O. Loop - Neuse River	4.97	14.4	60	35000	26400	60000	N	91
*Neuse River - US 1A	4.17	14.4	75	35000	18000	55000	N	91
US 1A - Franklin Co.	8.27	7.2	60	11000	14000	35000	B	ADQ
US 64 West								
Chatham Co. - O. Loop	5.43	7.2	60 VR	11000	9000	30000	B	ADQ
US 64 East								
*O. Loop - US 64 Bus	7.52	14.4	105	27000	35200	46000	E	ADQ
US 64 Bus - Little River	8.50	14.4	60	35000	21000	38000	ADQ	ADQ
Little River - US 264	4.18	14.4	87	35000	19000	36000	ADQ	ADQ
US 264 - Franklin Co.	3.82	14.4	87	35000	10000	18000	ADQ	ADQ
US 64 Bus								
US 64 - NC 97	2.80	14.4	51	27000	10500	21000	ADQ	ADQ
*NC 97 - SR 2364	1.22	7.2	18	11000	8000	18000	H	21
*Little River - SR 2348	1.57	7.2	18	11000	5500	13000	H	21
US 70 West								
*O. Loop - Durham Co.	3.83	14.4	54	35000	27000	88400	10L	60
US 70 East								
Johnston Co. - O. Loop	2.75	14.4	60	35000	27000	35000	ADQ	ADQ
US 70 Bypass (proposed)								
I-40 - Johnston Co.	--	--	--	37000	--	44000	B	60
US 264								
US 64 - Franklin Co.	4.97	7.2	123	35000	8800	25000	ADQ	ADQ
US 264A								
Johnston Co.- NC 97	3.33	7.2	18	11000	1700	4500	L	ADQ
US 401 South								
*Harnett Co. - SR 1100	2.33	7.2	18	11000	6100	15800	D	27
401 Bypass - O. Loop	5.60	14.4	45	35000	15100	34500	14.4	ADQ
O. Loop - SR 1010	1.27	14.4	45	35000	21200	46200	21.6	ADQ
US 401 North								
O. Loop - 401 Bypass	8.00	6.0	18	10000	15600	34000	B	45
NC 96 - Franklin Co.	4.08	7.2	18	11000	7000	16700	B	45

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT		Rdwy fig	ROW m
					1991	2015		
NC 39								
Johnston Co. - R/R	0.73	6.0	18	10000	1200	3800	L	21
R/R - US 264	0.87	12.0	30	10000	1400	4500	L	ADQ
US 264 - Franklin Co.	3.17	6.3	18	10000	1600	5200	L	21
NC 42 West								
Harnett Co. - SR 1101	1.18	6.0	18	10000	2400	6200	L	21
*SR 1101 - SR 1103	1.32	6.0	18	10000	4300	11000	D	27
NC 42 East								
*SR 2754 - SR 1006	4.12	6.0	30	10000	3600	12500	H	ADQ
SR 1006 - Johnston Co.	7.48	6.0	30	10000	3600	9200	L	ADQ
NC 50 North-West (Creedmoor Rd)								
*SR 1829 - O. Loop	1.83	14.4	30	27000	12100	32500	D	ADQ
O. Loop - SR 1834	2.83	6.6	18	11000	12100	31000	B	45
SR 1834 - NC 98	5.27	7.2	18	11000	6800	17400	B	45
NC 98 - SR 1831	2.60	6.0	18	10000	3700	8500	L	21
SR 1831 - Falls Lake	1.73	7.2	69	11000	3000	6800	L	ADQ
Falls Lake - Granville Co.	5.88	6.0	18	10000	3000	6100	L	21
NC 50 South-East								
Johnston Co. - O. Loop	1.50	7.2	30	11000	4200	9800	L	ADQ
NC 54 (see the GRUA Report)								
NC 55 South								
*Harnett Co. - SR 2767	3.65	8.4	18	11000	9500	19200	G	30
NC 55 North								
O. Loop - Durham Co.	3.83	7.8	45	11000	8200	36500	B	ADQ
NC 96								
Johnston Co. - SR 2347	2.22	6.0	18	10000	1800	5800	L	21
SR 2337 - Franklin Co.	19.47	6.6	30	11000	4500	9200	L	ADQ
NC 97								
*US 64 Bus. - SR 2370	5.40	6.6	30	11000	6000	13700	H	ADQ
US 264 - NC 39	1.97	7.2	30	11000	2300	5200	L	ADQ
NC 39 - Franklin Co.	0.82	6.3	18	10000	2000	4800	L	21
NC 98								
*Durham Co. - NC 98 Byp.	14.00	7.2	36	11000	8100	17500	B	45
*SR 2053 - SR 1945	3.62	6.0	18	10000	4800	14000	H	21
SR 1945 - Franklin Co.	3.28	6.0	18	10000	3600	9000	L	21
SR 1001 (Pearces Rd)								
Franklin Co. - SR 2320	6.53	5.4	18	9000	1600	3100	L	21

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	2015	Rdwy fig	ROW m
SR 1003 (Rolesville Rd) US 401 relocation in Rolesville - US 64 A	15.23	6.0	18	10000	3400	9800	L	21
SR 1003 (Eagle Rock Rd) US 64 A - Johnston Co.	7.53	6.0	18	10000	1700	3500	L	21
SR 1004 (East Garner Rd) Johnston Co. - SR 2555	4.63	6.0	18	10000	2800	7200	L	21
SR 1005 (Six Forks Rd) NC 98 - SR 2005 Ext.	4.83	6.0	18	10000	2700	8500	G	30
*SR 2005 Ext. - O.Looping	3.88	7.2	18	11000	9500	24000	G	30
O. Loop - SR 1829	1.67	7.2	18	11000	12100	31000	D	27
SR 1006 (Old Stage Rd) Johnston Co. - O.Looping	14.17	5.4	18	9000	2400	6300	L	21
*O.Looping - SR 1010	0.83	5.4	18	9000	5000	18000	H	21
SR 1007 (Poole Rd) O.Looping - SR 2233	5.33	6.6	18	11000	4500	9200	L	21
SR 2233 - SR 2360	6.82	6.0	18	10000	2500	5100	L	21
SR 1010 (Ten Ten Rd) (see the GRUA Report)								
SR 1011 (North Salem St) Chatham Co. - SR 1163	10.70	6.6	18	11000	1900	6000	L	21
*SR 1163 - O. Loop	0.33	6.6	18	11000	1900	7000	J	21
SR 1101 (Piney Grove Rd) Harnett Co. - NC 42	2.47	6.0	18	10000	1600	3300	L	21
NC 42 - SR 1115	8.08	5.4	18	9000	2300	4700	L	21
SR 1115 (Avent Ferry Rd) SR 1101 - SR 1127	7.35	5.4	18	9000	800	2000	L	21
SR 1127 (Holleman Rd) SR 1115 - Harris Lake	1.73	6.0	18	10000	500	2000	L	21
Harris Lake - SR 1011	6.43	5.4	18	9000	1500	3000	L	21
SR 1141 (New Hill-Olive Ch Rd) SR 1011 - SR 1143	4.33	5.4	18	9000	900	3600	L	21
SR 1143 - SR 1165	1.67	5.4	18	9000	700	2800	L	ADQ
SR 1165 - Chatham Co.	2.00	5.4	18	9000	700	2800	L	21
*SR 1152 (Holly Springs Rd) SR 1393 - O.Looping	3.03	5.7	18	9000	2300	12500	H	21
O.Looping - SR 1010	3.87	5.7	18	9000	5500	17700	D	27

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT		Rdwy fig	ROW m
					1991	2015		
SR 1153 (Old H.SP - Apex Rd)								
SR 1152 - SR 1154	2.73	Dirt	18	5000	70	3000	L	21
*SR 1154 - SR 1177	2.67	Dirt	18	5000	200	8000	J	21
*SR 1177 - US 1	0.17	5.4	18	9000	200	8000	J	21
SR 1160 (Olive Chapel Rd)								
SR 1141 - SR 1163	5.20	5.4	18	9000	800	4500	L	21
*SR 1163 - O. Loop	1.17	5.4	18	9000	1000	6000	H	30
SR 1163 (Kelly Rd)								
SR 1011 - SR 1160	3.50	5.4	18	9000	NA	NA	H	21
SR 1160 - SR 1600	2.17	Dirt	18	5000	NA	NA	H	21
*SR 1301 (Sunset Lake Rd)								
NC 55 - SR 1302	2.47	6.0	18	5000	200	8500	H	21
SR 1302 - SR 1152	1.80	6.0	18	10000	1600	9200	H	21
SR 1152 - SR 1393	5.10	5.4	18	9000	3000	11300	H	21
SR 1375 (Lake Wheeler Rd)								
SR 1393 - SR 1010	5.70	6.0	18	10000	2100	5500	L	21
SR 1386 (Bells Lake Rd)								
SR 1404 - SR 1010	4.40	6.0	18	10000	1300	4200	L	21
SR 1404 (Johnson Pond Rd)								
SR 1393 - SR 1386	1.63	5.4	18	9000	1500	3500	L	21
*SR 1600 (Green Level Ch Rd)								
SR 1163 - SR 1621	5.47	5.4	18	9000	NA	NA	H	21
SR 1621 - Proposed Ext.	0.33	6.0	18	10000	NA	NA	H	21
Proposed Ext. - Chatham Co.	3.55	6.0	18	10000	NA	NA	I	21
*SR 1605 (Green Level Rd West)								
Chatham Co. - SR 1600	3.27	5.4	18	9000	800	NA	H	21
SR 1600 - SR 1615	0.40	5.4	18	9000	1200	NA	H	21
*SR 1615 (High House Rd)								
SR 1605 - O. Loop	1.00	5.4	18	9000	1200	3100	H	21
*SR 1625 (Green Level Rd)								
SR 1600 - Proposed Ext.	0.50	7.2	18	10000	200	NA	H	21
Proposed Ext.	0.83	--	--	--	--	--	H	21
Proposed Ext. - Beg. Pave	0.67	Dirt	18	5000	200	NA	H	21
Beg. Pave - End Pave	0.33	6.0	18	10000	200	NA	H	21
End Pave - SR 1628	1.97	Dirt	18	5000	200	NA	H	21
SR 1628 - SR 1630	0.37	Dirt	18	5000	300	NA	I	21
*SR 1626 (Yates Store Rd)								
Chatham Co. - SR 1625	1.67	6.0	18	10000	400	NA	H	21

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	ADT 2015	Rdwy fig	ROW m
*SR 1628 (O'Kelly Chapel Rd)								
Chatham Co. - SR 1625	1.00	Dirt	18	5000	NA	NA	I	21
Proposed Ext.	0.57	--	--	--	--	--	I	21
*SR 1630 (Alston Ave)								
SR 1625 - Proposed Ext.	0.58	6.0	18	10000	300	NA	I	21
Proposed Ext.	0.50	--	--	--	--	--	H	21
Proposed Ext. - Durham Co.	2.67	6.0	18	10000	300	NA	H	21
*SR 1631 (Wake Rd)								
Chatham Co. - SR 1630	0.98	6.0	18	10000	200	NA	I	21
SR 1831 (Old Creedmore Rd)								
NC 98 - Durham Co.	2.95	6.0	18	10000	1000	4500	L	21
SR 1834 (Norwood Rd)								
O. Loop - SR 1005	8.60	5.4	18	9000	5000	12800	L	21
SR 1844 (Mt. Vernon Ch Rd)								
SR 1834 - SR 1005	3.37	6.0	18	9000	2700	9800	L	21
SR 1901 (Carpenter Pond Rd)								
Granville Co. - Falls Lake	1.03	7.2	48	11000	1800	8000	L	ADQ
Falls Lake - NC 50	0.72	5.4	45	9000	1800	8000	L	ADQ
SR 1901 (Old Weaver Tr Rd)								
NC 50 - Little Beaverdam Cr	4.68	7.2	45	11000	500	2500	L	ADQ
Little Beaverdam - SR 1907	2.17	5.4	18	9000	500	2500	L	21
SR 1907 (New Light Rd)								
Granville Co. - Falls Lake	7.02	5.4	60	9000	1500	4500	L	ADQ
Falls Lake - SR 1908	1.25	7.2	60	11000	1500	4500	L	ADQ
SR 1908 - NC 98	1.37	5.4	30	9000	2000	6500	L	ADQ
SR 1909 (Purnell Rd)								
SR 1907 - US 1	13.67	5.4	18	9000	1200	3500	L	21
SR 1917 (Stony Hill Rd)								
SR 1909 - NC 98	4.15	5.4	18	9000	1400	3400	L	21
*SR 1923 (Thompson Mill Rd)								
SR 1909 - SR 1926	1.02	6.0	18	10000	800	2000	L	21
SR 1926 (Jenkins Rd)								
SR 1923 - US 1	2.60	6.0	18	10000	650	3500	L	21
SR 1942 (Oak Grove Ch. Rd)								
NC 96 - Proposed W.F. Loop	3.58	5.4	18	9000	400	3500	L	21

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	ADT 2015	Rdwy fig	ROW m
SR 1945 (Averette Rd)								
NC 98 - SR 2053	2.30	5.4	18	9000	700	2500	L	21
SR 2000 (Falls of Neuse Rd)								
Strickland Rd - O. Loop	1.73	6.0	18	10000	12800	33000	D	27
*O. Loop - NC 98 Bypass (including realignment)	10.43	6.0	18	10000	5600	36000	G	33
*SR 2005 (Honeycutt Rd)								
SR 2000 - SR 2006	2.17	5.4	18	9000	3600	13000	H	21
SR 2006 - SR 2002	5.00	5.4	18	9000	2500	7500	L	21
SR 2002 - SR 1005	0.33	--	--	--	--	--	L	21
*SR 2006 (Durant Rd)								
SR 1005 - SR 2000	5.07	6.0	18	10000	3400	13800	H	27
SR 2000 - US 401 North	6.93	5.4	18	9000	6000	15400	D	27
SR 2044 (Ligon Mill Rd)								
SR 2045 - Smith's Creek	1.08	6.0	18	10000	900	3500	L	21
SR 2045 (Burlington Mills Rd)								
SR 2049 - US 1	4.37	6.0	18	9000	3900	10000	L	21
SR 2049 (Forestville Rd)								
US 1A in W.F. - US 401	8.20	5.7	18	9000	1400	4100	L	21
SR 2217 -SR 2228	3.22	6.0	18	10000	1800	6000	L	21
SR 2051 (Burlington Mills Rd)								
SR 2049 - US 401	3.62	5.4	18	9000	1700	3500	L	21
SR 2053 (Jones Dairy Rd)								
NC 98 - SR 1945	4.83	5.4	18	9000	2600	5500	L	21
*SR 2215 (Buffaloe Rd)								
O. Loop - SR 2234	7.33	5.4	18	9000	5900	19000	D	27
SR 2217 (Old Milburnie Rd)								
SR 2049 - SR 1003	9.45	5.4	18	9000	2300	7400	L	21
SR 2224 (Mitchell Mill Rd)								
*US 401 - SR 1003	7.47	6.0	18	10000	7100	18200	I	21
SR 1003 - NC 96	7.82	5.4	18	9000	1600	4600	L	21
SR 2231 (Horton Rd)								
SR 2232 - SR 2215	1.30	6.0	18	10000	1500	4500	L	21
SR 2232 (Old Knight Rd)								
SR 2049 - SR 2231	2.30	5.4	18	9000	1800	5000	L	21

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	ADT 2015	Rdwy fig	ROW m
SR 2233 (Smithfield Rd) SR 2513 - SR 2506	4.83	5.4	18	9000	1500	5800	L	21
SR 2234 (Mark's Creek Rd) SR 2215 - SR 1003	0.67	5.4	18	9000	2000	5800	L	21
SR 2300 (Pulley Town Rd) US 401 - SR 2301	4.17	5.4	18	9000	600	2500	L	21
SR 2303 (Halifax Rd) NC 96 - Franklin Co.	3.67	5.4	18	9000	1500	3800	L	21
SR 2308 (Fowlers Rd) SR 1003 - NC 96	8.00	5.4	18	9000	900	2300	L	21
SR 2320 (Riley Hill Rd) SR 1003 - NC 96	11.80	5.4	18	9000	3000	6800	L	21
US 64 - NC 97	2.03	5.4	18	9000	1800	3700	L	21
SR 2329 (Lizard Lick Rd) SR 2308 - SR 2320	4.83	6.0	18	10000	700	1400	L	21
SR 2329 (Marshburn Rd) SR 2320 - US 64	1.97	5.4	18	9000	2100	4500	L	21
US 64 - SR 2364	3.93	5.4	18	9000	2800	6400	L	21
SR 2345 (Chamblee Rd) R/R - Johnston Co.	3.38	5.7	18	9000	800	1700	L	21
SR 2349 (Morphus Bridge Rd) SR 2351 - SR 2352	2.90	5.4	18	9000	1500	2900	L	21
SR 2353 (Morphus Bridge Rd) SR 2354 - SR 2352	1.42	5.4	18	9000	1500	4000	L	21
SR 2358 (Lake Glad Rd) SR 2361 - SR 1003	1.67	5.4	18	9000	1600	4800	L	21
SR 2406 (Old US 64 E) Franklin Co. - SR 2342	4.30	6.0	30	10000	3300	6700	L	ADQ
SR 2506 (Major Slade Rd) SR 2509 - SR 2233	0.67	5.4	18	9000	400	2500	L	21
SR 2509 (Mine Plantation Rd) Johnston Co. - SR 2510	5.17	6.0	18	10000	1400	3000	L	21
SR 2510 - SR 2506	0.50	10.8	18	11000	1400	3000	L	21
SR 2542 (Old Baucom Rd) O.Loop - SR 2509	5.00	5.4	18	9000	1100	5500	L	21

WAKE CO. THOROUGHFARE PLAN STREET TABULATION AND RECOMMENDATIONS (METRIC)

Facility & Section	Existing X-Section			Capacity (LOS D) Current	Volumes		Recommended X - Section	
	Dist km	Rdwy m	ROW m		ADT 1991	ADT 2015	Rdwy fig	ROW m
SR 2555 (Auburn-K'dale Rd) O. Loop - SR 2511	2.58	6.0	18	10000	1400	6000	L	21
SR 2556 (Rock Quarry Rd) SR 1004 - SR 2542	1.55	6.0	18	10000	1200	3500	L	21
SR 2700 (White Oak Rd) Johnston Co. - O. Loop	1.00	5.4	18	9000	700	2800	L	21
SR 2754 (Kennebec Rd) SR 2762 - SR 2758	0.38	5.4	18	9000	500	1300	L	21
SR 2758 (Bud Lipscomb Rd) SR 2754 - SR 1006	3.33	5.4	18	9000	400	1300	L	21
SR 2770 (Angier Rd) Harnett Co. - SR 2767	4.00	5.4	18	9000	1800	4100	L	21

DEFINITIONS AND FOOTNOTES

ADQ - Adequate
 ADT - Average Daily Traffic
 Dist - Distance
 fig - Figure (refers to the cross section figures)
 ft - Distance in Feet
 GRUA - Greater Raleigh Urban Area
 LOS D - Level of Service D
 mi - Distance in Miles
 N/A - Insufficient data available
 Rdwy - Roadway
 ROW - Right-of-way
 SR - Secondary Road
 VR - Right-of-way varies
 X-section - cross section
 * - Differs from 1981 Wake County Plan

- * US 1 N - 1981 Wake County Plan recommended no changes to the existing four lane cross section from the Outer Loop to US 1 A.
- * US 64 BUS - 1981 Wake County Plan recommended a "B" cross section.
- * US 70 W - 1981 Wake County Plan recommended no changes to the existing four lane cross section. This now conforms to 1989 GRUA Report.
- * US 401 S - This section conforms to the Fuquay Varina Plan.
- * NC 42 - 1981 Wake County Plan recommended no improvements along this section. This cross section conforms to the Fuquay Varina Plan.
- * NC 50 W - 1981 Wake County Plan recommended a four lane cross section. This cross section conforms to the 1989 GRUA Report.
- * NC 55 S - Varies from the 1981 Wake County Plan, conforms to the Fuquay Varina Plan.
- * NC 97 - The 1981 Wake County Plan recommended no changes to the existing two lane cross section.
- * NC 98 - The 1981 Wake County Plan recommended a two lane cross section for the segment from Durham County to SR 1917 and from NC 98 Bypass to Franklin County.
- * SR 1005 - From SR 2005 to the Outer Loop, 1981 Wake County Plan recommends a five lane cross section. 1989 GRUA Report recommends a "G" cross section.
- * SR 1006 - From the Outer Loop to SR 1010, 1981 Wake County Plan recommended no changes to the existing two lane cross section.
- * SR 1011 - The 1981 Wake County Plan recommended no changes to the existing two lane cross section.
- * SR 1152 - The 1981 Wake County Plan recommended no changes to the existing two lane cross section.
- * SR 1153 - The 1981 Wake County Plan recommended no changes to the existing two lane cross section.

- * SR 1160 - The 1981 Wake County Plan recommended no changes to the existing two lane cross section.
- * SR 1301 - No improvements were recommended to the two lane cross section in the 1981 Wake County Plan. This cross section conforms with the Fuquay Varina and the Holly Springs Plan.
- * SR 1393 - No improvements were recommended to the two lane cross section in the 1981 Wake County Plan.
- * SR 1600 - These routes are not on the 1981 Wake County Plan, however they are
through included to show conformity with the 1989 GRUA Report and the Town of
SR 1631 Cary's Transportation Plan.
- * SR 1923 - 1981 Wake County Plan recommended a four lane cross section.
- * SR 2000 - 1981 Wake County Plan recommended a four lane cross section.
- * SR 2005 - Not on the 1981 Wake County Plan. This recommendation conforms to the 1989 GRUA Report.
- * SR 2006 - 1981 Wake County Plan recommended no changes to the existing two lane cross section. This recommendation conforms to the 1989 GRUA Report.
- * SR 2215 - 1981 Wake County Plan recommended a four lane cross section.
- * SR 2224 - 1981 Wake County Plan recommended no changes to the existing two lane cross section.

WAKE COUNTY ROUTES IN ALPHABETICAL ORDER

Alston Ave.	(SR 1630)	Halifax Rd	(SR 2303)
Angier Rd	(SR 2770)	High House Rd	(SR 1615)
Auburn-K'dale Rd	(SR 2555)	Holland Rd	(SR 2767)
Avent Ferry Rd	(SR 1115)	Holleman Rd	(SR 1127)
Averette Rd	(SR 1945)	Holly Springs Rd	(SR 1152)
Barbee St. Ext.	(SR 2348)	Honeycutt Rd	(SR 2005)
Barham Siding Rd	(SR 2301)	Horton Rd	(SR 2231)
Bass Lake Rd	(SR 1393)	Jake May Rd	SR (2360)
Bells Lake Rd	(SR 1386)	Jenkins Rd	(SR 1926)
Bud Lipscomb Rd	(SR 2758)	Johnson Pond Rd	(SR 1404)
Buffaloe Rd	(SR 2215)	Jones Dairy Rd	(SR 2053)
Burlington Mills Rd	(SR 2045)	Kelly Rd	(SR 1163)
Burlington Mills Rd	(SR 2051)	Kennebec Rd	(SR 2754)
Carpenter Pond Rd	(SR 1901)	Lake Glad Rd	(SR 2358)
Chamblee Rd	(SR 2345)	Lake Wheeler Rd	(SR 1375)
Eagle Rock Rd	(SR 1003)	Ligon Mill Rd	(SR 2044)
East Garner Rd	(SR 1004)	Liles-Dean Dr	(SR 2364)
Falls of Neuse Rd	(SR 2000)	Lions Rd	(SR 2354)
Fleming Rd	(SR 1103)	Lizard Lick Rd	(SR 2329)
Forestville Rd	(SR 2049)	Mailman Rd	(SR 2513)
Fowlers Rd	(SR 2308)	Major Slade Rd	(SR 2506)
Grasshopper Rd	(SR 2511)	Mark's Creek Rd	(SR 2234)
Green Hope Ch. Rd	(SR 1621)	Mine Plantation Rd	(SR 2509)
Green Level Rd	(SR 1625)	Mitchell Mill Rd	(SR 2224)
Green Level Rd West	(SR 1605)	Morphus Bridge Rd	(SR 2349)
Green Level Ch. Rd	(SR 1600)	Morphus Bridge Rd	(SR 2353)

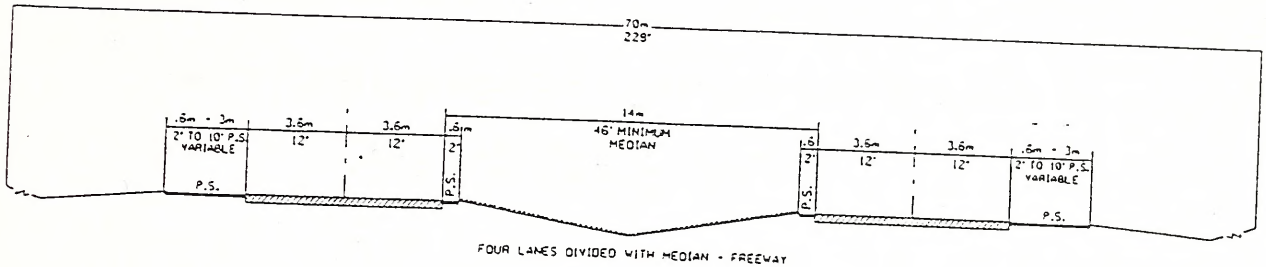
WAKE COUNTY ROUTES IN ALPHABETICAL ORDER

Mt. Vernon Ch. Rd	(SR 1844)	Pulley-Gorden Rd	(SR 2351)
New Hill-Olive Ch. Rd	(SR 1141)	Pulley Town Rd	(SR 2300)
New Light Rd	(SR 1907)	Purnell Rd	(SR 1909)
North Salem St	(SR 1011)	Raven Ridge Rd	(SR 2002)
Norwood Rd	(SR 1834)	Riley Hill Rd	(SR 2320)
Oak Grove Ch. Rd	(SR 1942)	Rock Quarry Rd	(SR 2556)
O'Kelly Chapel Rd	(SR 1628)	Rolesville Rd	(SR 1003)
Old Baucom Rd	(SR 2542)	Six Forks Rd	(SR 1005)
Old Creedmor Rd	(SR 1831)	Smithfield Rd	(SR 2233)
Old Crews Rd	(SR 2228)	Stephenson Rd	(SR 1302)
Old H.SP - Apex Rd	(SR 1153)	Stony Hill Rd	(SR 1917)
Old Knight Rd	(SR 2232)	Strickland Rd	(SR 1829)
Old Milburnie Rd	(SR 2217)	Sunset Lake Rd	(SR 1301)
Old Nowell Rd	(SR 2361)	Ten Ten Rd	(SR 1010)
Old Stage Rd	(SR 1006)	Thompson Mill Rd	(SR 1923)
Old US 64 E	(SR 2406)	Tippett Rd	(SR 2342)
Old Weaver Rd	(SR 1901)	Wake Rd	(SR 1631)
Olive Chapel Rd	(SR 1160)	Wake Union Ch. Rd	(SR 1929)
Olive Dairy Rd	(SR 1143)	Walter Myatt Rd	(SR 2756)
Pearces Rd	(SR 1001)	Water Plant Rd	(SR 2370)
Perry-Curtis Rd	(SR 2347)	White Oak Rd	(SR 2700)
Piney Grove Rd	(SR 1101)	Woods Creek Rd	(SR 1154)
Poole Rd	(SR 1007)	Yates Store Rd	(SR 1626)

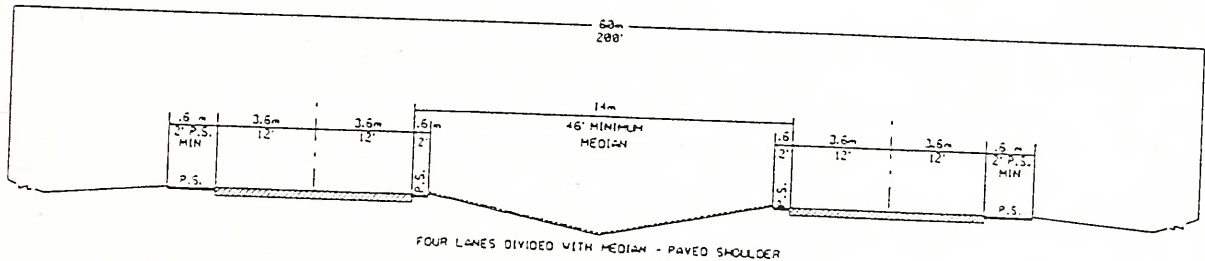
Note: The highlighted routes are on the Thoroughfare Plan.
All others are used as references in the street recommendations.

TYPICAL THOROUGHFARE CROSS SECTIONS

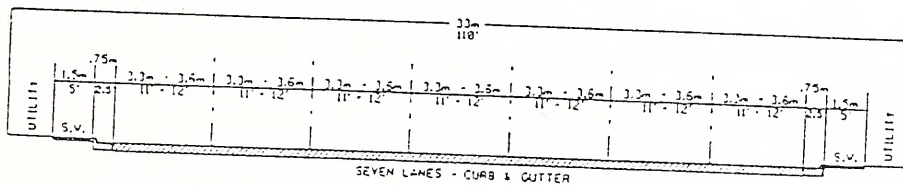
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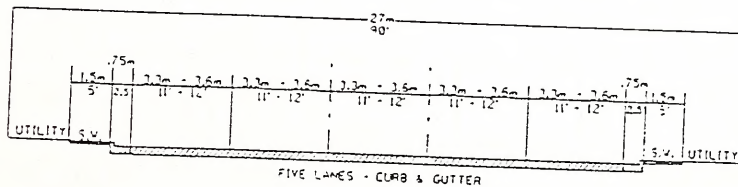
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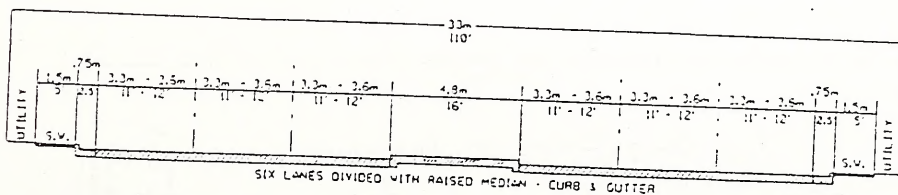
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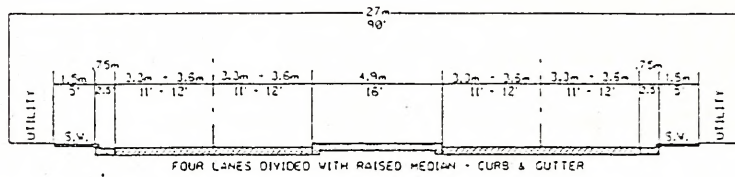


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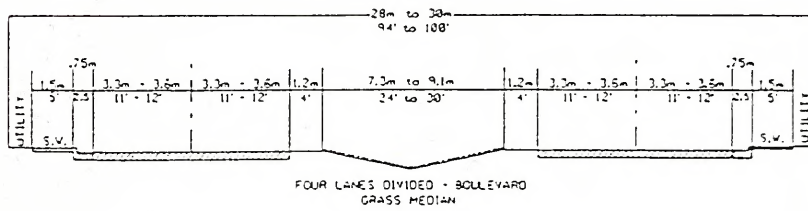


TYPICAL THOROUGHFARE CROSS SECTIONS

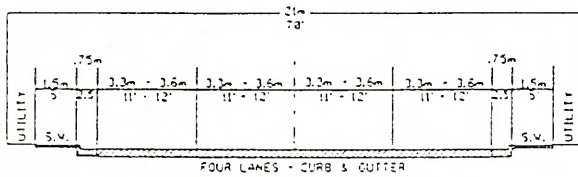
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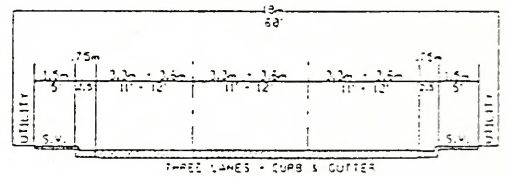
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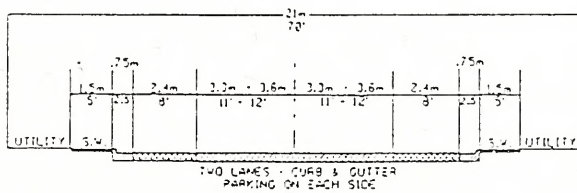
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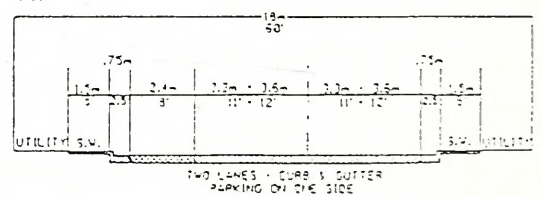
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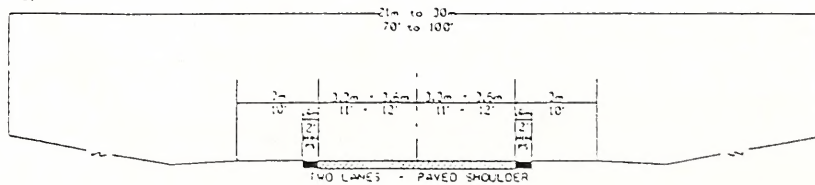
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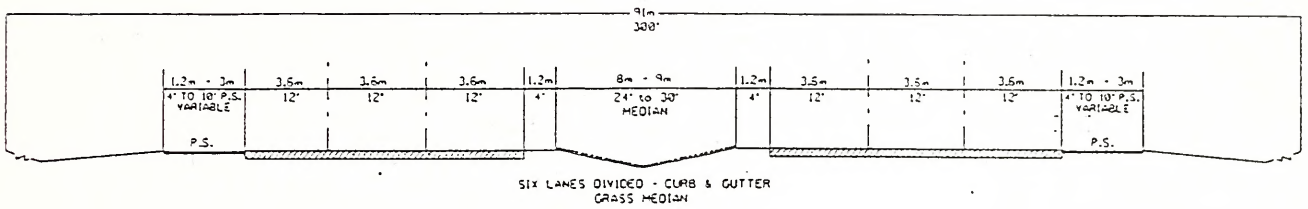


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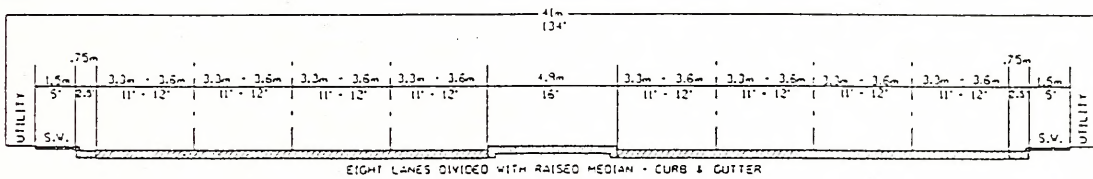


TYPICAL THOROUGHFARE CROSS SECTIONS

M.

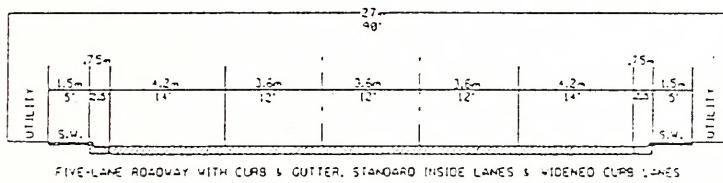


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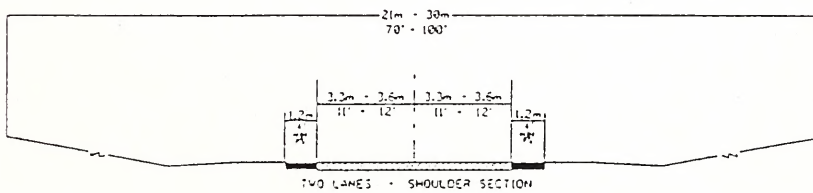


TYPICAL THOROUGHFARE CROSS SECTIONS FOR ACCOMMODATING BICYCLES

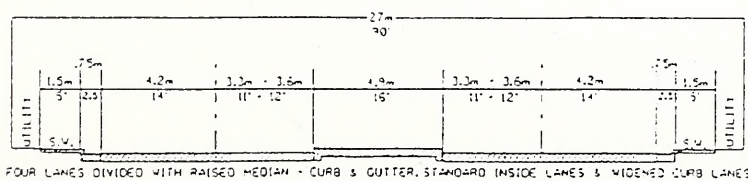
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